



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001**

August 1, 2022

The Honorable Christopher T. Hanson
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: SUMMARY REPORT – 696th MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS, JUNE 1-2, 2022

Dear Chairman Hanson:

During its 696th meeting, June 1-2, 2022, which was conducted in person and virtually, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters. The ACRS completed the following correspondence:

MEMORANDUM

Memorandum to Daniel H. Dorman, Executive Director for Operations (EDO), NRC, from Scott W. Moore, Executive Director, ACRS:

- Documentation of Receipt of Applicable Official NRC Notices to the Advisory Committee on Reactor Safeguards for June 2022, dated June 8, 2022, ADAMS Accession No. ML22158A039.

HIGHLIGHTS OF KEY ISSUES

- a. Items previously published in the *Federal Register* Notice that did not need to be addressed in the Full Committee meeting

The Committee's *Federal Register* Notice (FRN) announcing this meeting indicated that the ACRS would have presentations and discussions on "Outline for Draft SECY Paper to Allow for Consideration of Risk-Informed Alternatives for Addressing Digital Instrumentation and Control (DI&C) Common Cause Failure (CCF)." The FRN also announced that the ACRS would have presentations and discussions on the proposed rulemaking language for Title 10 of the *Code of Federal Regulations* (10 CFR) Part 53, Framework A. The Committee had planned to deliberate on both topics. As a result of discussions during the ACRS Digital Instrumentation and Control (DI&C) Systems Subcommittee and the Regulatory Rulemaking, Policies, and Procedures (RRPP): Part 53 Subcommittee, these topics were not presented in this Full Committee meeting. As allowed by the published agenda, the Committee focused on the information described below.

b. SHINE Operating License Application Review

The Committee discussed various aspects of the SHINE operating license application review, including memoranda documenting the lead Members' findings of different parts of the SHINE Final Safety Analysis Report and associated Safety Evaluation Reports. These memoranda will support future Committee deliberations and a final letter report from the Committee on the operating license application.

Over the course of this meeting (June 1-2), the Committee addressed memoranda on the following SHINE topics, all of which provide input for the ACRS final review report of the SHINE operating license:

1. Safety Evaluation for Chapter 6, Engineered Safety Features, Section 6b.3, "Criticality Safety" (Member March-Leuba)
2. Safety Evaluation for Chapter 8, "Electrical Power Systems" (Member Dimitrijevic)
3. Safety Evaluation for Chapter 9, "Auxiliary Systems" (Member Sunseri)
4. Safety Evaluation for Chapter 11, "Radiation Protection Program and Waste Management" (Member Bier)
5. Safety Evaluation for Chapter 12, "Conduct of Operations," Section 12.7, "Emergency Plan" (Member Halnon)
6. Safety Evaluation for Chapter 12, Conduct of Operation, Section 12.13 "Material Control and Accountability" (Member-at-Large Petti)
7. Safety Evaluation for Chapter 13, "Accident Analysis" (Member March-Leuba)

c. Discussions at the Planning and Procedures (P&P) Session

1. The Committee discussed the Full Committee and Subcommittee schedules through October 2022 as well as the planned agenda items for Full Committee meetings.
2. The ACRS Executive Director also led a discussion of significant notices issued by the Agency since the last Full Committee meeting in May 2022 (this activity is documented in the memorandum dated June 8, 2022).
3. Member Halnon led a discussion of the planned visit to Region III office the week of August 15, 2022 and covered the planned agenda. This visit will include site visits to the Region III office, the SHINE construction site, and the Byron operating plant.
4. Member Ballinger led a discussion about the status of the SHINE operating license application review and when ACRS interactions could take place (the ACRS "rainbow chart" was already populated with proposed Subcommittee and Full Committee meeting dates for this topic). As of this meeting, a final letter on the Committee's recommendation to the Commission is planned to be discussed and documented at the September 2022 Full Committee meeting.

5. Member-at-Large Petti provided a readout from the May 19, 2022, RRPP: Part 53 Subcommittee Meeting on Framework A of 10 CFR Part 53, "Risk-Informed, Technology-Inclusive Regulatory Framework for Commercial Nuclear Plants." The Committee agreed to the following documentation for this summary report.

"On May 19, 2022, the Staff briefed the RRPP: Part 53 Subcommittee on the consolidated Framework A rulemaking language for 10 CFR Part 53, "Risk-Informed, Technology-Inclusive Regulatory Framework for Commercial Nuclear Plants."

The staff summarized major revisions made to the proposed rule language since the initial language was issued. Staff also summarized additional rule language revisions that are reflected in the consolidated 10 CFR Part 53 Framework A that was made publicly available on May 11, 2022. Subpart F, "*Requirements for Operations*," of Framework A was not included in the presentation.

At the upcoming June 23 and 24 Subcommittee meeting, staff will present the proposed rulemaking language for Framework B of 10 CFR Part 53, in addition to the Subpart F requirements of Framework A that were not presented in the May Subcommittee meeting.

The staff also summarized the status of guidance documents that are to support the 10 CFR Part 53 rulemaking effort when it is ready to be published as a proposed rule next year.

Members of the Subcommittee recommended that the Full Committee not write another Letter Report on 10 CFR Part 53 Framework A proposed rule language in the June Full Committee meeting. However, the Subcommittee left open the possibility that additional comments may need to be made on Framework A, Subpart F depending on the discussions on this language in the June Subcommittee meeting. The Committee agreed with the Subcommittee recommendation.

6. Member-at-Large Petti also provided an update about the Committee's various upcoming activities involving the 10 CFR Part 53 rulemaking language and noted that Subcommittee and Full Committee meeting agenda items have already been identified on the rainbow chart and anticipated work schedule.
7. Member Brown led a discussion about the readout of the DI&C Systems Subcommittee meeting held on May 20, 2022, on the Outline for a Draft SECY Paper proposing an Expansion of the Current Policy in SRM-SECY-93-087 regarding potential CCFs in DI&C Systems. The Committee agreed to the following documentation for this summary report.

"On May 20, 2022, the Staff briefed the DI&C Systems Subcommittee on their Outline for a Draft SECY Paper proposing an Expansion of the Current Policy in SRM-SECY-93-087 regarding potential CCFs in DI&C Systems.

SRM-SECY-93-087 directs that, if the D3 assessment shows that a postulated CCF could disable a safety function, then a diverse means be provided to perform that safety function or a different function.

- Diverse means may include manual actions
- The current policy does not allow for the use of a risk-informed approach to determine specific circumstances that would not require a diverse means for addressing DI&C CCFs

The proposed SECY expansion would allow for consideration of risk-informed alternatives, instead of diverse means, for addressing DI&C CCF. If approved, implementation would be by revising Branch Technical Position (BTP) 7-19, "Guidance for Evaluation of Defense in Depth and Diversity to Address CCF due to Latent Design Defects in Digital Safety Systems."

Specific SECY language is not complete, so the staff presented their revision plan emphasizing the following:

- a. The expanded policy will encompass the current points of SRM-SECY-93-087 (with clarifications) and expand the use of risk-informed approaches.
- b. Any use of risk-informed approaches will be expected to be consistent with the Safety Goal Policy Statement, PRA Policy Statement, and SRM-SECY-98-0144.
- c. The current DI&C CCF policy option embodied in BTP 7-19, Revision 8, will continue to remain a valid option for licensees and applicants.

During the Subcommittee meeting, some member concerns were provided; namely, when incorporating risk-informed methods, it is important to ensure the following are maintained:

- a. Do not co-mingle the risk-informed guidance with the current BTP 7-19 guidance. Instead, develop a separate section as an alternate review process similar to what was done with ISG-06, Licensing Process, Revision 2.
 - b. The risk-informed process should continue the emphasis on having a defined detailed system architecture that meets the fundamental design principles of redundancy, independence, determinant data processing, defense-in-depth, and the need for communication devices that send data or commands to external plant systems or locations external to the plant should be by hardware-based data diodes that are not configured by software.
 - c. Staff should plan on the ACRS being provided a copy of the final SECY sent to the Commission and reviewing the future revision to BTP 7-19, if approved."
8. Member Ballinger led a discussion about the planned visit to the Framatome Fuel Facility scheduled for the week of September 19, 2022.
 9. Technical Support Branch (TSB) Chief Burkhart noted that he had emailed the CY2023 and CY2024 ACRS meeting calendars to all Members. He indicated that the 2023 calendar had been revised slightly to reflect the Regulatory Information Conference's correct dates of March 14 – 16, 2023. The Committee briefly discussed the proposed 2024 meeting calendar. The revised 2023 calendar was approved. The Committee will review the proposed 2024 calendar and discuss it during the December 2022 meeting.

10. Executive Director Moore led a discussion about protecting sensitive material, noting that it is especially important to not send sensitive material to personal email addresses. Only NRC email addresses should be used to share sensitive material.
11. The Executive Director mentioned that the announcements for two new ACRS Member vacancies are public and were published in the *Federal Register*. Members were encouraged to share with persons who may be interested.

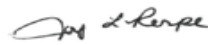
There were no reconciliations this month.

d. Scheduled Topics for the 697th ACRS Meeting

The following topics are on the agenda for the 697th ACRS meeting scheduled for July 6-7, 2022:

- SHINE memoranda review and deliberation
- Title 10 CFR Part 53 – Framework B and Framework A, Subpart F
- Information briefing on Advanced Manufacturing Technologies

Sincerely,



Signed by Rempe, Joy
on 08/01/22

Joy L. Rempe
Chairman

August 1, 2022

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