



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

June 1, 2017

The Honorable Kristine L. Svinicki
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: SUMMARY REPORT – 642nd MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS, APRIL 6-7, 2017

Dear Chairman:

During its 642nd meeting, April 6-7, 2017, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following reports, letter, and memoranda:

REPORTS

Reports to Kristine L. Svinicki, Chairman, NRC from Dennis C. Bley, Chairman, ACRS:

- “Draft NUREG/BR-0058, Revision 5, ‘U.S. Nuclear Regulatory Commission Guidance on Performing Regulatory and Cost-Benefit Analyses’,” dated April 18, 2017
- “Report on Subsequent License Renewal,” dated April 18, 2017

LETTER

Letter to Victor M. McCree, Executive Director for Operations, NRC, from Dennis C. Bley, Chairman, ACRS:

- “Safety Evaluation for the NuScale Power, LLC Licensing Topical Report TR-1015-18653-P, Revision 1, ‘Design of the Highly Integrated Protection System Platform’,” dated April 24, 2017

MEMORANDA

Memoranda to Victor M. McCree, Executive Director for Operations, NRC, from Andrea D. Veil, Executive Director, ACRS:

- “Documentation of Receipt of Applicable Official NRC Notices to the Advisory Committee on Reactor Safeguards for April 2017,” dated April 11, 2017
- “Regulatory Guides,” dated April 11, 2017

- Regulatory Guide 1.54, Revision 3, “Service Level I, II, III and In-Scope License Renewal for Protective Coatings Applied to Nuclear Power Plants”

HIGHLIGHTS OF KEY ISSUES

1. NuScale Topical Report 1015-18653, Highly Integrated Protection System Platform

The Committee met with representatives of the NRC staff and NuScale Power, LLC to discuss the NuScale topical report, “Design of the Highly Integrated Protection System [HIPS] Platform” and the associated safety evaluation report. The topical report describes a modular field-programmable gate array-based control system architecture and components that can be assembled into multiple configurations to support various types of reactor safety systems. In addition, the topical report describes how the HIPS platform design concepts meet the fundamental digital instrumentation and control design principles of independence, redundancy, predictability and repeatability, and diversity and defense-in-depth. It also describes the testing and diagnostics concepts applied to the HIPS platform. During the meeting the staff made presentations describing the connectivity and principles of operation of the system.

Committee Action

The Committee issued a letter to the NRC Executive Director for Operations on this matter, dated April 24, 2017, with the following recommendation: The HIPS platform is acceptable for use in plant safety-related instrumentation and control systems provided its implementation satisfies the staff application specific action items. The safety evaluation report of NuScale topical report TR-1015-18653-P, Revision 1 should be issued.

2. Subsequent License Renewal

The Committee met with representatives of the NRC staff to discuss draft NUREG-2191, “Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report” and draft NUREG-2192, “Standard Review Plan for Review of Subsequent License Renewal [GALL-SLR] Applications for Nuclear Power Plants.” During the meeting, the staff discussed proposed changes to the review process for subsequent license renewal.

Committee Action

The Committee issued a report to the NRC Chairman on this matter, dated April 18, 2017, with the following recommendation and conclusion: 1) The GALL-SLR, Volumes 1 and 2, and the SRP-SLR, provide appropriate guidance for review of a subsequent license renewal application and provide a framework for license extension for 20 years of safe operation beyond 60 years; they should be issued, and 2) The proposed review process that is informed by the aging management program audit and the use of Inspection Procedure 71003 will assure the facility is formally inspected, the aging management program and time limited aging analysis commitments are met, and all other condition relative to subsequent license renewal are fulfilled.

3. Draft NUREG/BR-0058, Revision 5, “U.S. Nuclear Regulatory Commission Guidance on Performing Regulatory and Cost-Benefit Analyses”

During its 641st meeting (March 2017), the Committee met with representatives of the NRC staff and discussed revisions to NUREG/BR-0058, "U.S. Nuclear Regulatory Commission Guidance on Performing Regulatory and Cost-Benefit Analyses."

Committee Action

The Committee issued a report to the NRC Chairman on this matter, dated April 18, 2017, with the following recommendation and conclusion: 1) The draft revision includes significant changes and important improvements to existing guidance, and its finalization will benefit from public comment at this time, and 2) Substantial material that is important to use of the guidance has been identified, but has not yet been completed. This material should be included and a subsequent opportunity for comment provided, prior to finalization of this revision.

RECONCILIATION OF ACRS COMMENTS AND RECOMMENDATIONS

- The Committee considered the Executive Director for Operations' response of March 24, 2017, to the February 22, 2017 ACRS letter, "Revision of Regulatory Guidance for Evaluating the Effects of Light-Water Reactor Water Environments in Fatigue Analyses of Metal Components." The Committee was satisfied with the Executive Director for Operations' response.
- The Committee considered the Executive Director for Operations' response of March 17, 2017, to the February 14, 2017 ACRS letter, "Response to the December 15, 2016 Staff Letter Regarding 'Draft Final Rule on Mitigation of Beyond-Design-Basis Events and Associated Regulatory Guidance'." The Committee was satisfied with the Executive Director for Operations' response.

SCHEDULED TOPICS FOR THE 643rd ACRS MEETING

The following topics are scheduled for the 643rd ACRS meeting to be held May 4-6, 2017:

- Risk-Informed South Texas Project License Amendment Request (GSI-191)
- Consequential Steam Generator Tube Rupture (C-SGTR)
- Northwest Medical Isotopes Overview (NWMI)
- Biennial Review and Evaluation of the NRC Safety Research Program

Sincerely,

/RA/

Dennis C. Bley
Chairman

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