



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

May 6, 2021

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

**SUBJECT: SUMMARY REPORT – 684th MEETING OF THE ADVISORY COMMITTEE
ON REACTOR SAFEGUARDS, APRIL 8-9, 2021**

Dear Chairman Hanson:

During its 684th meeting, April 8-9, 2021, which was conducted virtually due to the COVID-19 pandemic, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters. The ACRS completed the following correspondence:

LETTER

Letter to Margaret M. Doane, Executive Director for Operations (EDO), U.S. Nuclear Regulatory Commission (NRC), from Matthew W. Sunseri, Chairman, ACRS:

- Regulatory Guide 4.26, "Volcanic Hazards Assessment for Proposed Nuclear Power Reactor Sites," dated April 21, 2021, Agency-wide Documents Access and Management System (ADAMS) Accession No. ML21106A210

MEMORANDA

Memoranda to Margaret M. Doane, 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 April 2021, dated April 19, 2021, ADAMS Accession No. ML21103A006
- Regulatory Guides and Other Guidance, dated April 19, 2021, ADAMS Accession No. ML21103A009

HIGHLIGHTS OF KEY ISSUES

1. Regulatory Guide 4.26, "Volcanic Hazards Assessment for Proposed Nuclear Power Reactor Sites"

The NRC staff is preparing to review and regulate a new generation of nuclear power reactors. It has become apparent that some developers and vendors might site a reactor in an area of potential volcanic hazard. In the past, the staff had conducted reviews of volcanic hazards for existing facilities but had not issued guidance on considering these hazards. The Committee reviewed Draft Regulatory Guide (DG)-1364 (renumbered to DG-4028) on this topic.

DG-4028 was issued for public comment about a year ago. Most public comments and issues discussed at a Future Plant Designs and Regulatory Policies and Practices Subcommittee meeting on February 20, 2020, were incorporated into a new Regulatory Guide 4.26. In developing the guide, the staff relied heavily on two International Atomic Energy Agency documents—Technical Document (TECDOC)-1795 and Special Safety Guide (SSG)-21—as well as NRC reports on previous reviews of volcanic hazard assessments and guidance on other environmental hazards.

The staff has brought together a broad base of knowledge and organized it in an accessible way. Regulatory Guide 4.26 provides reasonable guidance for conducting volcanic hazards assessment for nuclear facilities and should be issued for trial use. The staff should consider enhancing the text as described in the Committee's letter report. The staff should support trial applications of the guide for specific facilities and locations to ensure it can be effectively and efficiently applied. Research is needed on the impact of volcanic hazards on the performance of equipment and personnel, inside and outside a facility, if applicants and staff are to fully implement the proposed analyses.

Committee Action

The Committee issued a letter on April 21, 2021, with the following conclusions and recommendations:

- Regulatory Guide 4.26 provides reasonable guidance for conducting volcanic hazards assessments for nuclear facilities.
- The staff should consider enhancing the text as described in this report. Trial applications of the guide for specific facilities and locations are needed to ensure it can be effectively and efficiently applied. Any problems identified during trial applications should be addressed by timely revisions.
- Research is needed to establish the impact of volcanic hazards on the performance of equipment and personnel, inside and outside a facility, if applicants and staff are to fully implement the proposed analyses.

2. NuScale Topical Report on Control Room Staffing

During the 684th meeting of the ACRS the Committee discussed NuScale topical report TR-0420-69456, Revision 1, "NuScale Control Room Staffing Plan," and the staff's safety evaluation report. NuScale and the NRC staff provided presentations to and discussed with the

Committee the rationale of the proposed staffing plan. The Committee plans to continue discussing and finalizing a letter report during the 685th meeting on the ACRS scheduled for May 5-7, 2021.

3. Overview of The NRC Safety Research Program Related to the Biennial Review

The Committee met with management and staff of the Office of Nuclear Regulatory Research (RES) in preparation for the Committee's biennial review and evaluation of NRC's safety research program, and subsequent ACRS report.

4. Discussions at the Planning and Procedures Session

The Committee discussed the Full Committee and Subcommittee schedules through August 2021 as well as the planned agenda items for Full Committee meetings.

The ACRS Executive Director also led a discussion of significant notices issued by the Agency since the last Full Committee meeting in March 2021 (this activity is documented in the memorandum dated April 19, 2021).

The Committee discussed recommendations on review of several draft and final regulatory guides and interim staff guidance documents, as documented in the memorandum mentioned above, dated April 19, 2021.

The Committee discussed a plan to propose topics and prepare for the next meeting with the Commission.

Member Bley led a discussion on planned meetings of the Future Plant Design Subcommittee on the topics of Committee comments on the rulemaking for advanced reactor licensing, and emergency planning for small and modular reactors and other nuclear technologies.

Member Ballinger led a discussion of the status of the SHINE operating license application review.

Member Ballinger led a discussion regarding future meetings on updates from fuel vendors and fuel vendor site visits. The Committee recommended that Member Ballinger work through the ACRS staff to arrange appropriate Subcommittee meetings and vendor site visits.

There were no official reconciliations to decide on how to respond to NRC staff positions regarding ACRS letter reports. However, Member Bley led a discussion about his proposal to lead a reconciliation discuss at the next Full committee meeting on two letters and staff responses on the advanced reactor computer codes issue.

During the closed session of the planning and procedures session, Chairman Sunseri led a discussion of personnel issues with a focus on planning for future needs of the Committee. Also discussed was proprietary information regarding the future Atomic Alchemy medical isotope licensing application.

5. SCHEDULED TOPICS FOR THE 685th ACRS MEETING

The following topics are on the agenda for the 685th ACRS meeting scheduled for May 5-7, 2021:

- Finalization of the Letter Report on NuScale Topical Report on control room staffing,
- Overview Interim Letter Report on Title 10 of the *Code of Federal Regulations* (10 CFR) Part 53 Rulemaking Language for Licensing of Advanced Reactors,
- NRC staff's white paper on fusion, and
- ACRS Bylaws Review

Sincerely,



Signed by Sunseri, Matthew
on 05/06/21

Matthew W. Sunseri
Chairman

May 6, 2021

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