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MEMORANDUM TO: Brian Thomas, Director
Division of Engineering
Office of Nuclear Regulatory Research

FROM: Tom Boyce, Branch Chief /RA/ (**S. Mehta for T. Boyce**)
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SUBJECT: SUMMARY OF THE 2017 NRC STANDARDS FORUM

On September 26, 2017, the Regulatory Guidance and Generic Issues Branch in RES/DE held the second annual NRC Standards Forum.¹ The purpose of the Standards Forum is to help identify needed standards within the nuclear industry that are currently not being addressed by standards development organizations (SDOs), and to collaboratively accelerate their development (see Enclosure 1 for Agenda). There were over 60 meeting attendees, which included representatives from many SDOs: ASTM, ASME, ANS, ACI, IEEE; as well as representatives from industry: NEI, EPRI and Technology Working Groups (TWGs) for advanced non-LWRs. There were also several representatives from DOE and DOE National Labs, and numerous staff from NRC/NRO, NRR and RES (see Enclosure 2 for full list of attendees).

This memorandum and its enclosures serve as a summary of the meeting, including a list of participants and action items. The presentations and handouts from the meeting can be found at <https://nrcweb.nrc.gov/about-nrc/regulatory/standards-dev/standards-forum.html>.

Summary

This year the forum addressed topics related to both operating and advanced reactors. The presentations addressed activities involved in identifying candidate topics for standards. It also identified areas and topics where different participants need to coordinate related activities. The forum accomplished its main objective, which was to help identify what standards are needed and to form coalitions to address such standards. The following is a list of the significant topics discussed and the major action items. Enclosure 3 provides a detailed summary of the discussions and Enclosure 4 provides a complete list of the Action Items.

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¹ Public Meeting Notice: <https://www.nrc.gov/pmns/mtg?do=details&Code=20171051>

- The Forum reviewed previous topics of interest to ensure progress and assist in coalition development (if needed). Some of these topics generated additional interest and coalition members, and new topics were identified by participants through presentations and discussions.
 - SDOs updated the participants on the status of identifying Champions and any activity for the topics they tentatively agreed to at last year's Forum. Participants were given the opportunity to indicate interest in joining coalitions for the topics.
 - Major action: The NRC will send out the list of topics to the participants for further identification of coalition members. This list is provided as Enclosure 5.
 - Participants made suggestions for the status of topics that were discussed in previous Nuclear Energy Standards Coordination Collaborative (NESCC) meetings.
 - Major action: The NRC will send out the list of topics to the participants for any further updates. This list is provided as Enclosure 6.
 - Electric Power Research Institute (EPRI) presented multiple topics from recently completed work, which included seismic analyses, piping systems and components for both operating and advanced reactors. The American Society of Mechanical Engineers (ASME) agreed to share some of the topics with their committees for interest level and possible identification of Champions for the issues.
- Many new topics/standards areas were identified in the advanced reactor sessions.
 - Through a gap analysis on standards for Sodium Fast Reactors (SFRs), DOE identified 19 standards that would need substantial changes, as well as the need for 12 new standards from multiple SDOs.
 - The TWG for Molten Salt Reactors (MSRs) identified materials and Instrumentation and Controls (I&C) as the most challenging issues, and required updated standards to address them.
 - The TWG on High-Temperature Gas-cooled Reactor (HTGR) did not identify any standards to be updated or developed; they intend to use current standards for their designs.
 - Participants agreed that a DOE-funded gap analysis for HGTRs and MSRs would be useful.
 - Separately, DOE indicated that a Funding Opportunity Announcement (FOA) will be published in early FY18 through the GAIN initiative.
- Since there were a large number of new topics that will potentially require coalitions to develop standards for advanced reactors, ANS proposed to take the lead to host a workshop. The workshop, proposed to be held in early CY18, will aim to develop a strategic vision and plan for advanced reactors standards development. The participants, including representatives from NRC/RES, NRC/NRO, EPRI and SDOs, agreed with this proposal. Enclosure 7 provides a list of the standards and areas.
 - Major Action: ANS will take the lead to initiate and plan a workshop. The NRC and DOE will work with ANS to plan the workshop.

- DOE presented their perspectives on standards development activities specifically related to advanced reactors.
- ANS and NRC/NRO presented on challenges and opportunities for risk-informed performance based standards.

It is anticipated that the next NRC Standards Forum will be scheduled for September 2018. In the interim, RES/DE/RGGIB will work with the Forum participants to address the action items.

ENCLOSURES:

Enclosure 1 - 2017 Agenda	(ML17333A678)
Enclosure 2 - Meeting Participants 2017 Standards Forum	(ML17326B055)
Enclosure 3 - Detailed Summary 2017 Standards Forum	(ML17326B056)
Enclosure 4 - 2017 NRC Standards Forum Action Item List	(ML17326B057)
Enclosure 5 - 2016 and 2017 Topics List	(ML17326B058)
Enclosure 6 - Current Topics (from NESCC meetings)	(ML17326B059)
Enclosure 7 - List of Standards Identified for ANLWRs	(ML17326B060)

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