



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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October 13, 2016

MEMORANDUM TO: Mark A. Thaggard, Acting Director
Division of Risk Analysis
Office of Nuclear Regulatory Research

FROM: Sean E. Peters, Chief /RA/
Human Factors and Reliability Branch
Division of Risk Analysis
Office of Nuclear Regulatory Research

SUBJECT: SUBMITTAL OF WHITE PAPER "PRACTICAL INSIGHTS AND
LESSONS LEARNED ON IMPLEMENTING EXPERT
ELICITATION"

Enclosed is the final version of the white paper, "Practical Insights and Lessons Learned on Implementing Expert Elicitation." This paper documents work led by the staff in the Human Factors and Reliability Branch (HFRB) to identify and pilot a standardized approach for NRC staff to use when performing expert elicitation, particularly for technical areas where no alternative guidance exists.

The work was performed in response to Staff Requirements Memorandum (SRM) COMGEA-11-0001, "Utilization of Expert Judgment in Regulatory Decision Making," which directed the staff to develop a guidance document that would promote the consistent use of expert judgment in regulatory decision-making. Further, SRM-SECY-11-0172 directed the staff to pilot the draft guidance in Level 3 probabilistic risk assessment (PRA) projects, including such areas as human reliability analysis (HRA) and severe accident analysis. In responding to these SRMs, HFRB staff initiated the effort to review research and experience related to expert elicitation, develop general guidance for NRC staff to use, and pilot the guidance in various decision-making activities.

As part of Project Aim activities, this SRM tasking was categorized as a Rebaselining Bin C item and scheduled to be closed by October 13, 2016. Although significant progress was made, additional time and resources would be required to complete the project as tasked in the SRMs. In particular, additional pilot testing would be needed across a broader range of technical areas, and refinement of the guidance to ensure consistency and compatibility with existing expert elicitation guidance in other technical areas. As a result, this paper documents insights and lessons learned from the work completed to date for knowledge management purposes.

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Initially, HFRB staff intended to publish this paper as a NUREG. A draft version of the NUREG was delivered to user offices (NRR, NRO, NMSS, and NSIR) for review in a memo dated August 31, 2016, titled, "Review of Draft NUREG "Guidance for Utilization of Expert Judgment." The HFRB staff received many constructive comments as a result of this review. The HFRB staff also held two meetings with senior technical advisors from NRO and RES to discuss the comments received and potential resolutions. The comments and discussions were very helpful, and the staff made substantial revisions to the paper in response to those comments. However, the resolution of some comments would require significant additional work and coordination among offices. In particular, NRO identified a concern that the draft NUREG could be interpreted as providing conflicting guidance to, and a new alternative and simplified approach to, established guidance on expert elicitation (e.g., NUREG-2117, NUREG-1563, NUREG/CR-6372). Given these concerns, the HFRB staff intends to make the revised document publicly available as a white paper instead of a NUREG. The unaddressed comments have been documented in Appendix B of the paper. The white paper will ensure that the progress made to date on the project is publicly documented, while still being sensitive to the concerns identified through the user office reviews.

Please contact Jing Xing (jing.xing@nrc.gov) at 301-415-2410 or Sean Peters (sean.peters@nrc.gov) at 301-415-2293 if you have any questions concerning the impending public release of this white paper.

Enclosure:
As stated

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