



UNITED STATES
NUCLEAR REGULATORY COMMISSION
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March 21, 2017

J. B. Fewell, Senior Vice President, Regulatory Affairs
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Dear Mr. Fewell:

On behalf of the Nuclear Regulatory Commission, I would like to thank you for sharing your concerns and making suggestions for improving the Significance Determination Process (SDP). The SDP, which supports NRC's Reactor Oversight Process (ROP), is a fundamental aspect of NRC's risk-informed regulatory framework. As such, the staff strives to continuously improve the SDP by addressing feedback from both internal and external stakeholders.

Your concerns regarding inspection findings at the Dresden Nuclear Power Station were addressed separately by the NRC Region III office in a letter dated February 27, 2017. My response deals with programmatic issues and is intended to continue the dialogue between the staff and external stakeholders on refining processes to better risk-inform our oversight. Specifically, we will continue to engage external stakeholders through appropriate vehicles, e.g., public meetings and workshops, to solicit feedback to enhance processes and guidance.

This engagement will cover the specific topics identified in your letter.

1. Use of the best available model. The agency has a process for continual improvement of NRC Standardized Plant Analysis Risk (SPAR) models. While licensee PRA models are typically more current than NRC's SPAR models, benchmarking efforts show that, by and large, SPAR and licensee models are in reasonable agreement. The staff recognizes that early engagement with licensees to improve the fidelity of applicable models is beneficial in making objective risk-informed determinations. The staff is currently evaluating best practices in this area to ensure the consistency of the staff's approach in implementing the SDP, including when and how to leverage licensees' PRA model insights.
2. Realistically treat failure events. For those instances where the SPAR model or the Risk Assessment of Operational Events Handbook (also known as the RASP manual) does not provide specific guidance or where the guidance is not applicable to a particular instance, the staff has the flexibility to use the best available information, e.g., inspection results or engineering judgement, to come up with the most appropriate model.

When evaluating potentially greater than green findings, the staff seeks the best available information on influential assumptions, which includes engagement with licensees. As part of adopting best practices, the staff intends to revisit both the timing and the scope of such engagement.

3. Rely on fact-based common cause failure (CCF) treatment. Technical guidance on the treatment of CCF is documented in a number of NUREGs and peer-reviewed technical papers. Recognizing the importance of this aspect of PRA modeling, the staff intends to launch a concerted outreach effort to develop a better understanding of appropriate approaches to the treatment of CCF in various regulatory applications.
4. Eliminate the arbitrary Human Reliability Analysis (HRA) minimum probability. The technical basis for going below the 10^{-6} in human error probability (HEP) lower threshold needs to be clarified. The staff will engage an appropriate cadre of external stakeholders to explore when and how a relaxation of the HEP threshold is appropriate.

To solicit feedback from external stakeholders on the topics covered above, the staff plans to conduct public meetings and workshops to discuss: (1) use of best available PRA model and realistic treatment of failure events; (2) treatment of common cause failures; and (3) human reliability analysis minimum probability threshold. The staff plans to hold these workshops and meetings beginning in early spring 2017 through the end of summer 2017. In addition to these outreach efforts, NRC will continue to rely on regional interface meetings between the staff and licensee to have open dialogue and share views on SDP best practices and concerns.

Once again, thank you and we look forward to working with you and other external stakeholders on improving the ROP.

Sincerely,

/RA/

William M. Dean, Director
Office of Nuclear Reactor Regulation

References:

Letter from J. Bradley Fewell, (Exelon Generation Company, LLC) (EGC) to William Dean (U.S. Nuclear Regulatory Commission (NRC), "Request for Improvements in NRC SPAR Model and RASP Handbook Use".

Letter from J. F. Lara (NRC) to B. C. Hanson (EGC), "Dresden Nuclear Power Station, Unit 3 – NRC Report 05000249/2016010 and Preliminary White Finding," dated December 5, 2016.

SUBJECT: NRC RESPONSE TO EXELON GENERATION COMPANY LETTER
REQUESTING IMPROVEMENTS TO NRC SPAR MODELS AND RASP
DATED: March 21, 2017

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