Response to Public Comments on Draft Regulatory Guide (DG)-1353 "Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors" Proposed Revision 0 of Regulatory Guide (RG) 1.233

On May 3, 2019, the NRC published a notice in the *Federal Register* (84 FR 19132) that Draft Regulatory Guide, DG-1353(Proposed Revision 0 of RG 1.233), was available for public comment. The Public Comment period ended on July 2, 2019. The NRC received one comment from the individual listed below. The NRC has summarized the comment and NRC staff response in the following table.

Comments were received from the following:

Richard S. Denning, PhD
2041 Hythe Road,
Columbus, OH 43220

The submittal from Dr. Denning (ADAMS Accession No. ML19158A457) provided a discussion of concerns prepared by himself and Vinod Mubayi, PhD. The NRC also received an email from the Nuclear Energy Institute (NEI) (ADAMS Accession No. ML19261B955) related to the comments provided by Drs. Denning and Mubayi. A summary of the comment and the NRC staff's response is provided below:

Section of DG-1353	Specific Comments	NRC Resolution
General	The development and interpretation of the frequency-consequence curve[1] proposed to be endorsed in DG-1353 does not have a strong technical basis. An underlying weakness of the proposed logic of assessing each candidate licensing basis event is that results could be influenced by the way an analyst chooses to define and group event scenarios. A better approach would be to consider a frequency-consequence curve as not only a tool for assessing individual licensing basis events but also as a bound on the complementary cumulative distribution function (CCDF) of accident sequences.	The staff agrees that the approach described by the commenters may be a viable alternative to the methodology described in DG-1353 and NEI 18-04. The alternative approach offers some advantages in terms of supporting the assessment of cumulative risk and the contributions from various licensing basis events. However, the methodology in DG-1353 and NEI 18-04 includes assessments of cumulative risks (e.g., a comparison to the NRC's safety goals) and supports the established objectives, which are the identification and assessment of licensing basis events; establishing safety classifications and performance criteria for plant features; and supporting evaluations of defense in depth. The possible concerns about analysts adjusting the results by redefining event sequences are expected to be addressed by

Section of DG-1353	Specific Comments	NRC Resolution
	[1] See Figure 3-1, "Frequency-Consequence Target," in NEI 18-04, Revision 1, "Risk-Informed Performance-Based Technology Inclusive Guidance for Non-Light Water Reactor Licensing Basis Development" (ADAMS Accession No. ML19241A472)	the implementation of consensus standards, integrated decisionmaking processes, peer reviews of probabilistic risk assessments, and the reviews performed by the NRC staff. For these reasons, the staff has determined that the methodology described in DG-1353 remains one acceptable approach for informing the licensing basis for advanced reactors and decided not to alter the guidance documents as requested.