



Commissioner Wright's Comments on "SECY-20-0045: Population Related Siting Criteria for Advanced Reactors."

The development of population related siting criteria for advanced reactors represents an important step in establishing an effective regulatory framework for advanced reactor technology. The NRC's ability to establish this framework in a timely manner is critical, because a timely, efficient, and predictable framework would be consistent with the NRC's role in protecting public health and safety and contribute to the United States' common defense and security.

The staff's recommended approach (Option 3) would revise population guidance to consider performance-based criteria based on radiological consequences from design-specific events. This approach is consistent with the Commission's long-standing recognition that improvements in reactor design may potentially affect siting decisions. This technology-inclusive, risk-informed approach moves away from deterministic siting criteria, consistent with the NRC's approach to establish emergency preparedness requirements for small modular reactors. This approach would also leverage existing requirements, operating experience, analyses, and research and allow for flexibilities based on design-specific characteristics of advanced reactor technology, including inherent safety features and lower power levels that may limit the release of radionuclides. The staff's recommended approach should effectively meet the NRC's important safety and security mission in a manner that does not inhibit the development and licensing of new technologies. Therefore, I approve Option 3.

As the ACRS recognized, for this approach to be truly effective substantial work must be done to identify the appropriate licensing basis events for evaluation and to develop suitable methodologies for calculating mechanistic source terms. The staff should integrate Probabilistic Risk Assessment (PRA) and mechanistic source term methods into its approach to identify likely events, outcomes, and consequences. The staff should keep the Commission informed on its efforts to develop the PRA standard and the mechanistic source term methodology for advanced reactors.