NRC Seeks Comment on Proposed Rule for Emergency Preparedness at Small Modular Reactors and Other New Technologies

The Nuclear Regulatory Commission is seeking comment on a proposed rule and associated draft regulatory guide to apply risk-informed, performance-based emergency preparedness requirements to small modular reactors and other new technologies. These technologies include non-light-water reactors and certain non-power production or utilization facilities. The Commission approved the rule for publication today.

The NRC’s existing emergency preparedness program for nuclear power plants has focused on large, light-water cooled reactors. The proposed rule and related guidance consider advances in facility designs and safety research and their application to future operation of small modular reactors and other new technologies.

The NRC is proposing to amend its regulations to create an alternative emergency preparedness framework for SMRs and other new technologies. The alternative requirements and implementing guidance would adopt a risk-informed, performance-based, and technology-inclusive approach. The alternative requirements would include a scalable approach for determining the size of the emergency planning zone around each facility, based on the distance at which possible radiation doses could require protective actions. The public and other interested parties can use this rulemaking effort to comment on emergency preparedness policy issues such as:

- What planning activities should apply to the performance-based approach?
- How should hazard analysis be applied to the performance-based approach?
- What specific factors or technical considerations are needed when applying the scalable EPZ approach?

This proposed rule does not include within its scope emergency planning, preparation, and response for current power reactors, fuel cycle facilities or currently operating non-power reactors.

The NRC began considering a possible performance-based approach to emergency preparedness several years ago, when SMRs and other new technologies were being considered for potential licensing. The Commission approved a rulemaking plan for this proposed rule in June 2016. The NRC staff published a draft regulatory basis for public comment in April 2017, and considered the comments in finalizing the regulatory basis, which was issued in November 2017.
The proposed rule will be published soon in the Federal Register. Comments will be accepted until 75 days after publication, through the federal rulemaking website regulations.gov by using Docket ID NRC-2015-0225.