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Emergency Preparedness Requirements for Small Modular Reactors and Other New Technologies

Comment On: NRC-2015-0225-0071
Emergency Preparedness for Small Modular Reactors and Other New Technologies; Proposed Rule

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Comment on FR Doc # 2020-09666

Submitter Information

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General Comment

See attached file(s)

Attachments

Regulation Comment NRC-2015-0225

Commissioners and Staff of the Nuclear Regulatory Commission:

The proposed regulation is a long overdue improvement to emergency planning. I am an experienced engineer with a background in power systems and risk. I currently focus on academic risk analysis research and emergency preparedness.

Emergency planning would not be eliminated or abandoned with the proposed rule. The emergency plant would instead be risk-informed and commensurate to the technology being used. The existing rule was not designed for SMRs or ONT. The typical 10-mile EPZ size was determined for different technology and completed before existing analysis methods and tools were available. The current regulation could be overly burdensome for SMRs and ONTs while providing no more additional safety or benefit to the public.

It is clear that the majority of comments opposing the proposed regulation have not in fact read the proposal. The content of the comments is almost entirely incorrect or covered by other regulations that are already in place and outside the score of this proposed rule.

Excessive emergency response can have greater risk than the initial accident. For example, transportation during an evacuation carries risk. Evacuating an oversized EPZ can put more people at risk than would be needed to avoid radiological risk. This needs to be considered from the start, when the EPZ is established.

Several comments refer the responsibility of the NRC to protect the public. I completely agree the NRC has this responsibility and a strong regulator is important. The proposed regulation further enables the NRC to carry out that mission through risk-informed and performance-based analysis instead of outdated and prescriptive regulations. The risk to the public is not being increased. The EPZ size can only be scaled down to a level that ensures the dose threshold is maintained.

It is important to acknowledge the sense of fear in the majority of submitted comments. Most of these people would not hesitate to get an X-ray for a sprained arm, take a long overseas flight for a vacation (before COVID-19), or bother to check their home for the presence of radon. They have a disproportionate fear of nuclear power from a lack of

knowledge. It is vital that the NRC, DOE, and industry better educate and communicate with the public.

There is one part of the regulation that I feel should be changed. Under "*OFFSITE RADIOLOGICAL EMERGENCY PREPAREDNESS PLANNING ACTIVITIES*" it states "*For SMR and ONT applicants and licensees complying with proposed § 50.160 that establish a plume exposure pathway EPZ at the site boundary, the NRC would not mandate offsite radiological emergency planning activities*." It is my opinion that capabilities to notify OROs and create offsite dose projections should be required even for licensees with a site-boundary EPZ. These capabilities are needed for OROs to plan and respond if needed, are not overly burdensome, and do not affect the risk-informed intent of this proposed rule. I see no reason for these capabilities to not be required.

I support the proposed regulation and see no reason to further extend the comment period.

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