

**Rulemaking Comments****PRM-50-104  
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OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

Emergency planning for nuclear emergencies has remained largely static since 1980, so many of these plans are outdated and do not adequately protect the health and safety of United States citizens. This is increasingly apparent as we can see from the ongoing issues at Fukushima in Japan.

The current 10-mile emergency evacuation zone does not adequately protect from the effects of ionizing radiation. The evidence from Fukushima and Chernobyl demonstrates that radiation releases from nuclear accidents can be greater than computer modeling or simulations suggest both in geographic coverage and duration.

According to the National Academy of Sciences BEIR VII report, there is no safe dose of radiation, and women and children are affected more by radiation than men. Evacuation regulations must be protective of the most vulnerable in the population.

The ingestion pathway EPZ is also grossly inadequate, and should be expanded to 100 miles. Food contamination at both Fukushima and Chernobyl has been far reaching and persistent. In Chernobyl, radionuclides tainted crops and animal products hundreds of miles away. More than 25 years after that accident, sheep in Wales--hundreds of miles away--remain interdicted. Similarly, in Fukushima contamination of rice, milk, and other food has been exhibited 100 miles and more from the site.

Current NRC regulations do not require that emergency exercises take into consideration an initiating or concurrent natural disaster that might further complicate accidents and subsequent evacuation efforts.

Weather patterns are growing more extreme and dangerous. In 2011, hurricanes, earthquakes, and flooding caused damage to U.S. nuclear reactors. As such, emergency preparedness drills and exercises should include regionally appropriate natural disasters such as droughts, flooding, blizzards, earthquakes, wildfires, and hurricanes.

A hurricane in the Chesapeake Bay region could have serious impacts on the Calvert Cliffs nuclear facility south of Washington, DC, within 50 miles of millions of people, including more than 100,000 residents of Calvert County and adjacent counties. Many of these residents have limited evacuation options since Calvert County is on a narrow peninsula with only two bridges providing routes to the south and west, and no routes to the east.

Many of the residents near the facility are not familiar with evacuation plans. Others who live within 25 miles of the plant are not even aware of the proximity, especially those who live in places like Cambridge, Maryland, on the eastern shore, less than 15 miles distant. Prevailing winds could easily carry radiation to the eastern shore, both to populated areas like Cambridge and to popular vacation destinations like the Blackwater National Wildlife Refuge, just across the Chesapeake Bay from the reactor facility.

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Similarly, many throughout central Maryland are not aware of the proximity to the Calvert Cliffs and Peach Bottom reactors. Howard County, Maryland is within 50 miles of both reactor sites. Few in the county are aware of the reactors, evacuation procedures, etc. Traffic in the Washington, DC and Baltimore metropolitan regions are currently rated among the worst in the country. Experience with snowstorms in 2010 and the August, 2011 earthquake in Virginia which affected the North Anna nuclear plant, showed that emergency response capability in the Washington area is woefully inadequate.

It is for all these reasons that I request that the NRC adopt the proposed rule expanding emergency planning zones to the respective 25, 50, and 100 mile zones and add a new requirement that emergency exercises include scenarios of regionally appropriate initiating or concurrent natural disasters.

Thank you,

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