

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

I am writing from Vermont to urge the NRC to support the proposed rule expanding evacuation planning zones around nuclear plants and requiring more realistic planning.

There are urgent reasons to support expanded and enhanced evacuation planning. Those reasons are the operating nuclear power plants that are scattered across the country, and including the more antiquated or dangerously sited reactors such as Indian Point, Diablo Canyon and Vermont Yankee.

Standards for evacuation planning should be informed by the known consequences of the most recent major nuclear accident. According to the official report of the Fukushima Nuclear Accident Independent Investigation Commission, posted at [http://www.nirs.org/fukushima/naic\\_report.pdf](http://www.nirs.org/fukushima/naic_report.pdf)

"It is estimated that as much as 1,800 square kilometers of land in Fukushima Prefecture has now been contaminated by a cumulative radiation dose of 5 millisieverts or higher per year. Insufficient evacuation planning led to many residents receiving unnecessary radiation exposure. Others were forced to move multiple times, resulting in increased stress and health risks—including deaths among seriously ill patients."

What happened at Fukushima, Japan is cause for grave concerns about the nuclear power plant which (thanks to the NRC, and over the objections of the state of Vermont) is still operating in Vernon, Vermont. As reported in the Christian Science Monitor:

"The venerable Vermont Yankee reactor, which is involved in a battle to win a new re-licensing that would let it operate another 20 years, has a design similar to the Fukushima plant. It holds seven percent more total radioactivity than the four Daiichi reactors combined - and nearly three times the amount of spent fuel that was stored in at Fukushima's Unit 4 reactor, which caught fire."

<http://www.csmonitor.com/USA/2011/0525/Report-Unacceptable-threat-from-spent-fuel-pools-at-US-nuclear-power-plants>

The on-going events at Fukushima demonstrate that nuclear power disasters can have sustained and far reaching effects. A major concern associated with Fukushima and other nuclear disasters is the evacuation of affected populations. In the United States, emergency planning for nuclear emergencies has remained largely static since 1980, when regulations pertaining to emergency planning were initially enacted after the Three Mile Island accident. These plans are outdated and do not adequately protect the health and safety of United States citizens.

Specifically, the current 10-mile emergency evacuation zone does not adequately protect from the effects of ionizing radiation, despite what computer modeling and simulations may demonstrate. The real world experiences of Fukushima and Chernobyl are direct evidence that radiation releases from nuclear accidents can be greater than computer modeling or simulations suggest. Indeed, the accident at Fukushima resulted in sustained and large releases of radiation for a period of several weeks.

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More than 150,000 people evacuated near Fukushima, from as far as 25 miles away--50,000 of those, according to the Associated Press (5/16/12) evacuated from outside the mandatory evacuation zones. Meanwhile, the U.S. Nuclear Regulatory Commission and U.S. State Department recommended that Americans within 50 miles of Fukushima evacuate. Even so, as much as 80% of the airborne radiation released at Fukushima blew directly over the Pacific Ocean, rather than populated areas. The NRC cannot rely on favorable wind patterns to protect the American public.

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. At Fukushima, a natural disaster (coupled with faulty reactor design) initiated the disaster. Both Fukushima and the U.S. experience with Hurricane Katrina demonstrate the difficulties associated with evacuating when a natural disaster strikes that causes roadways to wash out.

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.

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 for considering my concerns.

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