

**PRM-50-104  
(77FR25375)**

# PUBLIC SUBMISSION

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**Docket:** NRC-2012-0046  
Petition for Rulemaking Submitted by Nuclear Information and Resource Service and Multiple Co-Petitioners - Expansion of Emergency Planning Zone

**Comment On:** NRC-2012-0046-0003  
Emergency Planning Zone; Notice of Receipt and Request for Comment

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RULEMAKINGS AND  
ADJUDICATIONS STAFF

## Submitter Information

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**Organization:** Nebraska Emergency Management Agency

**Government Agency Type:** State

**Government Agency:** Nebraska Emergency Management Agency

## General Comment

See attached file(s)

## Attachments

Comments on PRM-50-104 NRC 2012-0046

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STATE OF NEBRASKA  
COMMENTS RECOMMENDATIONS

ON PETITION TO EXPAND 10-MILE EPZ TO 25 MILES, INCLUDE NEW EPZ FROM 25 to 50 MILES EXPAND IPZ OUT TO 100 MILES (PRM-50-104; NRC-2012-0046)

Page/Paragraph	Comment/Recommendation
<p>PRM-50-104 Paragraph III.C. Page 13</p>	<p>The title of Paragraph III.C states "Little Change To Emergency Planning Regulations in 30 Years".</p> <p><b>RESPONSE:</b> The NRC and FEMA took up the work add Supplement 4 to NUREG-0654/FEMA-REP-1 and FEMA revised the REP Interim Program Manual and it has become the REP Program Manual as of October 2011 with an update of April 2012. The REP Program Manual will be updated annually hereafter with subsequent changes as they come out. These changes deal with emergency preparedness and emergency response out to 50-miles in the Ingestion Planning Zone.</p>
<p>PRM-50-104 Paragraph III.C. Last Sentence Page 13 &amp; 14</p>	<p>It states, "The NRC also concluded that both the Chernobyl RBMK reactor and the Soviet regulatory scheme were so different from the U. S. reactors that they did not provide a sufficient basis for amending the U. S. emergency planning regulations.</p> <p><b>RESPONSE:</b> This is entirely correct and the NRC was absolutely correct in its findings as the reactor at Chernobyl was a graphite moderator reactor which not commercially used in the United States.</p>
<p>PRM-50-104 Paragraph IV.1 Page 14</p>	<p>Paragraph IV. 1 entitled: "Chernobyl, September 11 and Fukushima experiences" tries to use the justification of Chernobyl man-created disaster, the terrorist attack on the New York Trade Center on September 11, 2001, and the 9.0 earthquake off Japan on March 11, 2011 which caused a tsunami wave that measured up to an estimated 46 feet at Fukushima to show that emergency planning regulations must be strengthened to protect the public health and safety adequately.</p> <p><b>RESPONSE:</b> As stated prior, there are no commercial reactors in the U. S. of the Chernobyl design and using this incident as justification is wrong. Utilities in conjunction with the the NRC have strengthened security so that it would be almost impossible for a terrorist attack on a nuclear power plant. Terrorists desire "soft" targets to target large civilian populations, not hard targets. Finally, at Fukushima the three reactors were built to and did withstand the 9.0 earthquake. They worked as designed and shut down. It was design height of the tsunami barrier that was overcome that caused the three reactors at Fukushima to fail. Even with three reactors failing, the order to evacuation eventually only reached about 12.5 miles. The NRC/State Department order to evacuate U. S. citizens out to 50 miles has yet to be justified scientifically.</p>

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<p>PRM-50-104 Paragraph IV.1.b Page 17</p>	<p>Paragraph IV.1.b entitled: "September 11, 2001 attacks" claims in the last paragraph on page 17 "Although a September 11-style attack on a nuclear power plant or irradiated fuel pool could result in a catastrophic accident with significant offsite radiation releases, the NRC did not re-examine its offsite emergency planning regulations as part of this "top-to-bottom" review."</p> <p><b>RESPONSE:</b> The NRC in conjunction with FEMA from 2008 through 2011 completed such a review and added regulations for planning and exercising for terrorism attacks. The NRC completed NUREG-0654/FEMA-REP-1, Rev-1., Supplement 4: Criteria for National Preparedness Initiative Integration, Exercise Enhancement, and Backup Alert and Notification Systems. The NRC has in draft form NUREG-0654/FEMA-REP-1, Rev-1., Supplement 3: Guidance for Protective Action Recommendations for General Emergencies &amp; FEMA has completed the new REP Program Manual in which spells out new guidance for planning and exercising. So there has been a "top-to-bottom" re-examination of emergency planning regulations. It should be pointed out though, that each state is sovereign and the NRC and FEMA cannot dictate what to do in an actual emergency!</p>
<p>PRM-50-104 Paragraph IV.1.c Page 17 &amp; 18</p>	<p>On page 18 it states, "These people should have been evacuated much earlier - a tested evacuation plan and appropriate radiation monitoring likely would have substantially reduced this population's exposure to radiation."</p> <p><b>RESPONSE:</b> Japan had just experienced the worst earthquake in recorded history and had more to deal with than just nuclear power station emergencies. No matter what amount of regulations the petitioners request and no matter what amount of regulations are put in place; if a disaster as large as a 9.0 earthquake or a Katrina Hurricane occurs, the population will have to fend for itself for at least the first 72 hours according to FEMA's Publication "Are You Ready, An In-Depth Guide to Citizen Preparedness."</p>
<p>PRM-50-104 Paragraph IV.1.c Page 18</p>	<p>On page 18 it also states concerning the evacuations [relocations] "For these reasons, in October 2011 Japan announced plans to expand its own emergency planning zones to include a 30 kilometer (18 mile) evacuation zone and a 50 kilometer (30 mile) Plume Protection Planning Zone."</p> <p><b>RESPONSE:</b> The NRC should review the physical stockpile of each nuclear reactor and if there is a possibility that a release from that stockpile could exceed the 10-mile EPZ, then the NRC should consider that one size EPZ may not fit all nuclear power plants in the U. S. However, to say that all present 10-mile EPZ's should be expanded to 25 miles cannot be scientifically, politically or financially justified.</p>

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<p>PRM-50-104 Paragraph IV.1.c Page 18</p>	<p>The last paragraph on page 18 states "During the months that following commencement of the Fukushima accident, numerous hotspots have been found throughout north-central Japan, 100 miles and more from the Fukushima Daiichi Site."</p> <p><b>RESPONSE:</b> And the reference cited is "The Geigher Club: Mothers Bust Silent Radiation Consensus, Jun 17, 2011. A Blog Site. Now just how seriously is one to take such a reference. Where is the science?"</p>
<p>PRM-50-104 Paragraph IV.1.c Page 19</p>	<p>This page discusses where and what types of radiation where found in and around the Fukushima Prefecture and out to 18 kilometers or about 12 miles. It also states some farms as far away as 100 kilometers or about 62 miles away had been contaminated by radiation from Fukushima.</p> <p><b>RESPONSE:</b> The radiation described out to 18 kilometers or about 12 miles (Our 10-Mile Emergency Planning Zone and Evacuation Zone as well initial Ingestion Planning Zone is to be expected in such incidents. However, the petitioners fail in discussing the findings at the farms in scientific terms as far away as 100 kilometers or about 62 miles away. The petitioners failed to cite the type of contamination or in the quantities. Were the radiation readings below those requiring action by the government in the ingestion pathway planning zone?</p>
<p>PRM-50-104 Paragraph IV.1.c Page 19</p>	<p>The petitioners state that Japanese Authorities found radioactive beef from outside the exclusion zone that was sold in at least Japanese markets and stopped shipments of rice from farms some 60 kilometers (or about 37 and a quarter miles) from ground zero. The petitioners also stated that radioactive particles were found in infant formula produced in a plant north of Tokyo.</p> <p><b>RESPONSE:</b> The petitioners fail to identify how the radioactive beef got outside the exclusion zone. Did the beef feed on radioactive contaminated grass as the petitioners would have you think or could the beef have been smuggled out by the farmer still trying to obtain cash for his hard work? The contaminated rice was still within what would be considered our 50-mile Ingestion pathway which is no justification for expanding it to 100 miles. Finally, the petitions again would like the reader to believe that the radioactive particles found in infant formula came down on the factory contaminating the infant formula. Once again, the petitioners don't consider the fact that some milk farmer producing milk for this infant formula producing factory might have smuggled and sold radioactive contaminated milk to the factory before an embargo was put in place.</p>

<p>PRM-50-104 Paragraph IV.5 Page 30</p>	<p>The title states "Improved understanding of the health effects of radiation" and goes on to state "There is no "safe" dose of radiation, and as such the consideration of the effects of the release of radiation should be given greater consideration. The National Research Council of the National Academy of Sciences BIER VII Report in 2006 confirmed that any exposure to radiation - including background radiation - increases a person's risk of developing cancer."</p> <p><b>RESPONSE:</b> First, the petitioners use a quote from a report by those opposed to nuclear energy. Second, it appears the petitioners would have us all wear lead shielding to prevent us from being exposed to background radiation if they could. Finally, the National Research Council of the National Academy of Sciences BIER VII Report in 2006 states in the paragraph entitled "Risk Estimates At Very Low Doses" (to radiation). The report concludes that the preponderance of information indicates that there will be some risk, even at low doses, <b>ALTHOUGH THE RISK IS SMALL.</b> Emphasis added!</p>
<p>PRM-50-104 Paragraph V.A Page 34</p>	<p>The title states "Creation of a three-tiered Emergency Planning Zone." and goes on to state "The NRC should amend 10 C.F.R. 50.47©(2) to create a three-tiered emergency planning zone, including an expansion of the current 10-mile EPZ to include area within 25 mile radius of a reactor site, establishing an emergency evacuation zone of a 50 mile radius within a reactor site, and expand the radius of the ingestion pathway to a 100 mile radius within a reactor site."</p> <p><b>RESPONSE:</b> The State of Nebraska desires that the NRC review the stockpile of each nuclear reactor to determine if there is a need of an expansion of the 10-mile EPZ at each individual nuclear reactor site based on science and possible hazards that could severely impact the nuclear reactor. The State of Nebraska does not believe that a 25-mile Emergency Planning Zone is required for each and every nuclear reactor in the United States. In addition, the State of Nebraska is wholeheartedly opposed to the establishment of an emergency evacuation zone of a 50 mile radius within the reactor site as it does not believe such a zone would provide any additional assistance in an evacuation. Finally the State of Nebraska strongly opposes the expansion of the Ingestion Pathway Planning Zone to a 100 mile radius within a reactor site. The manpower, training, and equipment costs alone would be prohibitive and the production of nuclear energy would become cost prohibitive in our opinion.</p>

<p>PRM-50-104 Paragraph V.A1. Page 34 &amp; 35</p>	<p>The title states "25 Mile Plume Exposure Pathway EPZ" and goes on to state "A plume Exposure Pathway zone shall consists of an area about 25 miles (40 km) in radius. Within this zone, detailed plans must be developed to provide prompt and effective evacuation and other appropriate protective measures, including conducting biannual full-scale emergency evacuation drills. Sirens will be installed within this zone to alert the population of the need for evacuation. Transportation for elderly, prison and school populations shall be provided within this zone. Emergency shelters shall be located outside the 25-milezone." It then goes on to state below this paragraph in the last sentence on the bottom of page 34 and continuing onto page 35 it states "It would provide no new requirements other than expansion of the EPZ".</p> <p><b>RESPONSE:</b></p> <p>1) To reemphasize, the State of Nebraskahe believes that the NRC should review the physical stockpile of each nuclear reactor and if based on science there is a possibility that a release from that stockpile could exceed the 10-mile EPZ, then the NRC should consider that one size EPZ may not fit all nuclear power plants in the U. S. However, to say that all present 10-mile EPZ's should be expanded to 25 miles cannot be scientifically, politically or financially justified. (CONTINUED BELOW).</p>
<p>PRM-50-104 Paragraph V.A.1 Page 34 &amp; 35 CONTINUED FROM ABOVE:</p>	<p><b>RESPONSE:</b></p> <p>2) The petitioners are requesting the conduct of biannual "full-scale" emergency evacuation drills. Presently, medical drills are "full-scale" full- scale as defined by the Homeland Security Exercise and Evaluation Program (HSEEP) which defines what a drill, functional and full-scale exercises are. Presently, the NRC and FEMA conduct biannual functional exercises. Functional.exercises are used to demonstrate that all key players can perform their assigned functions per the plans to protect the health and welfare of the general public. The conduct of a biannual "full-scale" exercise as defined, would require that everyone, including the general population within the 25-mile Plume Emergency Planning Zone, participate in these exercises and that just will not happen.</p>

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<p>PRM-50-104 Paragraph V.A.1 Page 34 &amp; 35 CONTINUED FROM PAGE 5 Above</p>	<p><b>RESPONSE:</b></p> <p>3) To say state that the expansion of the 10-mile Plume Emergency Planning Zone to 25-miles "would provid no new requirements other expansion of the EPZ" is ludicrous. The current 10-mile EPZ is 314 square miles. Increasing the EPZ to 25 miles would increase the area to 1,963 square miles. This is an additional planning, training and equipping of emergency first response personnel with radiological equipment out to an additional area of 1,649 square miles. The manhours and cost required for developing and maintaining plans, for conducting training, for milage, vehicles and fuel, for the amount of additional equipment required in this additonal area, not to mention the need to identify and move present reception and care facilities, emergency worker decontamination stations and shelters could be cost prohibative for small nuclear reactors. Science must prevail here in determining if the stockpile within each reactor requires an expansion of the 10-mile EPZ and to what distance.</p>
<p>PRM-50-104 Paragraph V.A.2 Paragraph 35</p>	<p>Paragraph V.A.2 states "50 Mile Emergency Response Zone" and goes on to state "The plume exposure pathway EPZ shall be about 50 miles in radius. Within this 50 mile zone, the licensee must identify evacuation routes for all residents within this zone and annually provide information to all residents within this zone about these routes and which they are supposed to take in the event of an emergency. The licensee must make basic pre-arrangements for potential transport of disabled/hospital/prison populations. Emergency centers for public currrently located less than 25 miles out shall be relocated to 25 miles or further out. Information shall be made available to the public within this zone through television, internet and radio alerts, text message notices, and other appropriate means of public communications.</p> <p><b>RESPONSE:</b> The petitioners in the above portion of their request indirectly are requiring that all Reception and Care Facilities, Emergency Worker Decontamination Stations and Shelters be at least 50 miles. The petitioners desire to put responsibilities on the nuclear power plants that are the soveriegn responsibility of State and local entities, e.g. evacuation of "disabled/hospital/ prison populations. The petitioners desire to dictate through regulation changes that the nuclear power plants use certain means to notify the public in the 25 to 50 mile zone using certain means of alert and notification. This again is the sole responsibility of soveriegn State and local entitles to protect the health and welfare of their citizens. With this said, the State of Nebraska completely and wholeheartedly is against the establishment of an additional and new emergency planning zone that it believes serves no useful purpose other than expand by surreptitious means the 10-mile emergency planning zone out to 50 miles.</p>

<p>PAR-50-104 Paragraph V.A.3 Page 36</p>	<p>Paragraph V.A.3 states "100 mile Ingestion Exposure Pathway Zone:" and continues to state "The ingestion pathway EPZ shall be about 100 miles in radius. In the event of a radioactive release, the deposition of radionuclides on crops, other vegetation, bodies of surface water and ground surfaces can occur. Measures will be implemented to protect the public from eating and drinking food and water that may be contaminated. Information shall be made available through television and radio alerts, text message notices, and other appropriate means of public communications."</p> <p><b>RESPONSE:</b></p> <p>The State of Nebraska believes that even based on the information provided by the petitioners, a 100 mile ingestion pathway EPZ is excessive. The citing of Chernobyl as justification for this cannot be used, first because the U. S. does not have commercial carbon moderated nuclear reactors and second, the former Soviet Union did not immediately notify the world of the incident or its severity which did not allow countries from taking steps to prevent the uptake of deposition far from the incident. The citing of Fukushima provides a bit more justification, but more scientific study and evidence is needed to justify the doubling of the size the ingestion pathway IPZ. So until such time as scientific study and sound evidence is provided, Nebraska believes the 50 mile ingestion pathway IPZ should remain as is.</p>
<p>PAR-50-104 Paragraph V.A.3 Page 36</p>	<p>At the bottom of page 36 is a bolded paragraph title "Other related Amendments to Enhance Emergency Planning" and it goes on to state "Amend 10 C.F.R. 50.47(b)(14) by adding: Within the emergency evacuation zone full scale drills and exercises will be conducted on a biannual basis. Every other exercise and drill shall include a scenario involving an initiating or concurrent regionally-appropriate natural disaster.</p> <p><b>RESPONSES:</b></p> <ol style="list-style-type: none"> <li>1) The State of Nebraska has already responded to the petitioners request that there be "full-scale" drills and exercise. This will not happen, as by definition, everyone must play within the emergency planning zone. People have to work and this does not allow them to participate in such events, even if it is only once every two years.</li> <li>2) Even before the NRC and FEMA made revisions to their programs, most nuclear power plants were using regionally appropriate natural disasters to precipitate radiological events in their biannual functional exercises. The new exercise methodology just re-emphasizes this.</li> </ol>



## Rulemaking Comments

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**From:** Gallagher, Carol  
**Sent:** Monday, July 16, 2012 8:31 AM  
**To:** Rulemaking Comments  
**Subject:** Comment on PRM-50-104  
**Attachments:** NRC-2012-0046-DRAFT-0173.pdf

Van,

Attached for docketing is a comment from Jonathan Schwarz, Nebraska Emergency Management Agency, on the above noted petition for rulemaking that I received via the regulations.gov website on July 13, 2012.

Thanks,  
Carol