

3/8/2010
75 FR 10324

31

PUBLIC SUBMISSION

As of: August 03, 2010
Received: August 03, 2010
Status: Pending_Post
Tracking No. 80b27830
Comments Due: August 09, 2010
Submission Type: Web

Docket: NRC-2010-0080

Notice of Availability of NUREG-0654/FEMA-REP-1, Revision 1, Supplement 3, Guidance for Protective Action Recommendations for General Emergencies

Comment On: NRC-2010-0080-0009

NUREG-0654/FEMA-REP-1, Rev. 1, Supplement 3, Guidance for Protective Action Recommendations for General Emergencies; Draft for Comment

Document: NRC-2010-0080-DRAFT-0038

Comment on FR Doc # 2010-11842

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RECEIVED

2010 AUG -3 AM 10:50

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General Comment

Please see attached Word file.

Attachments

NRC-2010-0080-DRAFT-0038.1: Comment on FR Doc # 2010-11842

*SUNSI Review Complete
Template = ADM-013*

*E-RIDS = ADM-03
Add = R. Sullivan (RX53)*

To Whom It May Concern,

Comments to Docket ID NRC-2010-0800

The following is offered in response to the NUREG-0654, FEMA-REP-1, Rev 1, Supplement 3, Guidance for Protective Action Recommendations for General Emergencies, Draft Report for Comments, Docket ID NRC-2010-0800, and its request for comments. These comments are my personal views based on over 10-years involvement in the REP program and are not meant to be taken as the official or unofficial viewpoints of either the Commonwealth of Pennsylvania or the state agency I work for.

1. The Abstract, page iii, suggests that licensees and OROs discuss and agree to the PAR logic diagram and further should develop a site-specific PAR logic diagram. This seems to direct that each site should have a customized PAR logic diagram. While I would encourage that approach it does raise the question as to whether an industry that is fanatical about standardization is going to willingly embrace a concept that would require following different PAR logic diagrams based on the OROs they are dealing with. This could become a challenge when dealing with single EOFs and response teams that incorporate multiple plants and could get extremely tricky when dealing with plants that have an EPZ that encompasses multiple states with differing PAD options. Who will be the arbiter if the utility and ORO fail to reach an agreement concerning ORO input at various decision points. Currently in Pennsylvania all five nuclear power plants use PAR logic diagrams that enable them to provide numerous PAR variations from sheltering to many variations of evacuation. Pennsylvania policy has been and remains to either shelter or evacuate the entire 10-mile EPZ from 0-360 degrees. There is no in between. In this case what possible use to OROs is a utility PAR of, for instance, "evacuate 0-5 miles in sectors SSE, E, and ENE and shelter the remainder?" Everyone already knows we are going to evacuate the entire EPZ. The utility arriving at any other PAR besides shelter or full evacuation is just a technical exercise that serves no purpose to those of us trying to protect the public. Customizing a PAR logic diagram is a great idea providing entrenched habits and resistance can be overcome.

2. Page 2 provides a synopsis of the PAR Study results. I have serious doubts about the overall accuracy of responses given by those surveyed in the no stress, non-emergency environment of a comfortably seated focus group or answering a series of questions over the telephone while relaxing at home. Attitudes and perceptions can change real fast with the stress of a dangerously broken reactor coupled with the harsh reality of actually leaving your home and possessions for what could be a very long time. You simply cannot replicate that level of angst in a survey. However, the survey results do provide an opportunity to modernize the lock-step protective measures that have been ingrained in the REP program since its inception. The following opinions are offered for the listed bullet points:

Point 1 – I agree that radial evacuation should remain the primary protective action.

Point 2 – Sheltering-in-place does not need to receive more emphasis. We already consider it when there is a possibility that putting the public in motion would be more dangerous than

remaining. Instances that would call for a sheltering PAD would be severe weather events and perhaps, however unlikely, a security event that has armed terrorists presenting a threat to the general public. (Though it is hard to envision the public sitting at home potentially being taken hostage is any better than a threat they may encounter while in motion driving out of the EPZ.) The major reason provided for recommending more emphasis on sheltering-in-place is what is now being called a “rapidly progressing severe accident.” This term gives the impression that our federal partners are still trying to resurrect the concept of “fast breaker” that the rest of us thought had gone away with the 2002 update of the evaluation program. You can’t assure everyone that instant disaster at a nuclear power plant is virtually inconceivable and turn around and say let’s pretend it can still happen and develop procedures to deal with it anyway. Just give OROs the best PAR possible, let us check it with our experts, and we will provide a decision that in our judgment best protects our citizens. We simply cannot plan or develop lucid procedures for every meteor strike, sun explosion, or F-18 tornado that has a one in a billion chance of occurring. Either make this fast breaker, by whatever name you choose to call it, go away or inform the public that commercial nuclear power plants can break so quickly that they will not have time to evacuate the area before leaked radiation reaches them and everyone needs to plan for such an eventuality.

Point 3 – Staged evacuations are worth a look, but I suspect they sound better on paper than what would actually happen in reality. In Pennsylvania we have the necessary TCPs designated and the resources in place to man them to enable the entire EPZ to evacuate simultaneously. Our ETEs are based on the entire EPZ leaving at once. I hold that it would be impossible to successfully have the rest of the EPZ stay put while the 0-2 mile population evacuates past them and it would be unwise emergency management to expect them to do so. Again, what someone says they will do in a telephone survey can be very different from what they do with a real radiation threat occurring or looming.

Point 4 – This is a great idea that should have been stressed years ago. There is no reason schools and parks cannot be closed at SAE and it makes emergency management sense to do so. Like an early snow dismissal this is not particularly disruptive and parents know exactly where their children have gone. It also prevents teachers and staff from having their cars stuck in school parking lots for indeterminate amounts of time waiting to be monitored before release back to owners. Probably more important than all it frees up major transportation assets (school buses) should a general evacuation of the EPZ occur later. You may also consider cancelation or early dismissal of sporting and cultural venues and unnecessary government offices within the EPZ.

Points 5 and 6 are pretty much standard knowledge and it shouldn’t have required a formal study to reach these obvious conclusions.

Point 6 – This also highlights an area that needs more emphasis. Prisons, hospitals, and care facilities for the non-ambulatory or severely disabled need more planning emphasis. They require enormous resources that simply will not be available initially. The solution may be to attempt to harden these facilities for sheltering versus attempting to evacuate them.

3. The paragraph on page 3 of this document states that it is “Federal guidance” but later states that it will also be used to aid in determining compliance with 10 CFR 50.47(b)(10). This may be legal semantics, but it seems that anything that is used to determine compliance falls more in the realm of regulation instead of guidance – especially if punitive action may result from non-compliance.

4. Page 4, paragraph 2 seems to recommend that the licensee confer with the ORO concerning the PAR, provided it does not delay the 15-minute PAR deadline the licensee must meet. This is a moot point that really does not require guidance. The licensee PAR is only one of the considerations the senior state official (SSO) will use in making a protective action decision (PAD). In Pennsylvania the utility provides the PAR directly to the SSO and his staff. This enables the 15-minute deadline to be met and also allows the SSO and staff the opportunity to ask questions for clarification. Only after consultation with state staff concerning technical aspects and environmental and weather concerns does the SSO make a PAD. Discussing these with the licensee prior to their PAR gains no one anything. To clarify – the PAD is a deliberate SSO decision, not a compromise between the licensee and state.

5. Page 6, paragraph 2 mentions using a 90 percent ETE to develop a PAR. I cannot speak for other states, but our ETEs have been developed on the premise of evacuating 100 percent of the population. I don’t know where the 90 percent figure came from. Our ETEs don’t even provide a 90 percent estimate and why should they? It would be baffling, not to mention highly inaccurate, to make a 90 percent estimate based on what is originally just an estimate for 100 percent of the population. Just have the licensee consider their areas of expertise (radiation and engineering data) and let the OROs worry about ETEs, weather, and security conditions.

6. Page 7, paragraph 2.4 states that a wind persistence analysis may not be used to justify a default PAR to evacuate 360 degrees. Pennsylvania already uses a form of wind persistence analysis to justify our automatic decision to evacuate 0-10 miles, 360 degrees. Based on this predetermined state policy any PAR provided by the licensee that is less than that is merely an academic exercise on their part.

7. The page 13 definition of Evacuation Time Estimate needs clarification if you are going to stick with the 90 percent idea posited on page 6.

8. If the PAR Logic Diagram on page 17 has to be used it must be simplified. The diagram is so complicated that it even comes with three full pages of detailed notes that attempt to explain how to use it. It would be amazing if a licensee would even stand a chance of developing and transmitting a PAR within 15-minutes using such a complicated and wordy maze to reach a decision. Frankly we have encountered no major issues with the PAR logic diagrams currently being used by the licensees in the state and fail to see how complicating the issue for them further is going to provide any benefit. We would be much more interested in a PAR logic

diagram that led to the only three responses currently used in this state: do nothing, shelter, or evacuate 0-10 miles, 360 degrees. Anything else merely serves to add confusion.

9. Note 1 on page 18 and in other places once again raises the unwillingness on the part of our federal partners to let the “fast breaker” issue die. Calling it something else like a “rapidly progressing severe accident” is not fooling anyone. As stated in paragraph 2, point 2 earlier we simply cannot plan for every “one in a billion chance” freak event that may occur. There would be no end to the possible permutations a logic diagram would have to have to futilely try to cover all of these fantastical possibilities.

10. Note 2 on page 18 and note 8 on page 19 stresses that the utility should base their PAR on impediments to evacuation that the OROs have identified. Again, it would be preferable that the utility base their PAR on their own on-site equipment status and radiological projections. The OROs will factor in evacuation impediments along with other considerations as we develop our PADs. There seems to be a misconception on the part of our federal partners that the OROs just blindly accept the utility PAR and convert it word for word into a PAD. Nothing could be further from the truth. We will handle issues outside of the fence – let the licensee concentrate on what is going on inside the fence.

11. Note 5 on page 19 defines a concept called “heightened preparedness” that has now suddenly become an official protective action. I fail to see the purpose of adding a new term to the program when it seems to provide no improvements. It is unclear who came up with this idea or why. We consider there are two protective actions, shelter and evacuation, and that is the way it should remain. If after hearing sirens going off and watching EAS messages crawl across TV screens at Site Area Emergency people still haven’t caught on that something newsworthy is going on it is doubtful that creating a new protective action is going to help. Current guidance on messages to the public already stress that EAS messages must instruct the public to stay tuned for additional information. This “heightened preparedness” idea seems to be no more than a solution in search of a problem and should be dropped.

12. Nowhere in the PAR Logic Diagram or the attached notes is there any mention of what to do if the OROs have already decided to expand on the licensee PAR and initially evacuate the entire 10-mile EPZ. If that occurs, which it does frequently in this state, what purpose, besides an academic exercise, is served by putting the licensee through further PAR discussions and 15-minute deadlines? There should be some mention that once the entire EPZ has been ordered to evacuate there is no further need for utility PARs unless some unbelievable, theoretically nearly impossible event occurs that could threaten the public with radiation beyond the 10-mile zone.

13. Reference notes 6 and 7; I pity the mathematical wizard that has to figure out the algebra involved with these two instructions within the 15-minute timeframe.

14. Point 4 on page A-6 mentions that public information brochures should contain information to limit shadow evacuations. This is not germane in a state that automatically evacuates the entire EPZ. Anyone outside of the EPZ who would contribute to a shadow evacuation would not be receiving a copy of the brochure anyway. They would have to be reached via media announcements during the event.

15. Paragraph 3.1 on page A-7 alludes to making “heightened preparedness” a protective action. It needs to go away. We have already prepared to raise public awareness in the event of a disaster. It is something that occurs naturally during any incident and doesn’t need to be federally codified or given consideration as part of a PAR.

16. There is a difference to providing public information in a colorful brochure that people may actually read versus trying to cram so much information into a brochure that people simply ignore it. The three points at the top of page A-8 are just three examples of futilely trying to cover every possibility that a group of fertile, but idle minds can come up with. There are uncountable studies that show the key to getting something read is to keep it visually pleasing and as simple as allowable to get the basic messages across.

17. Paragraph 3.5 on page A-9 is a further example of continuing to add information to a brochure until it passes the point where the target audience becomes disinterested in reading it because of its size.

18. One concern about the efficacy of a preferential shelter option would be what becomes of evacuees’ cars. Having the population wait in huge shelter facilities while the plume passes by or dissipates does not seem to consider the fact that their automobiles they drove and parked outside of the sheltering facility or left at their homes are now potentially “dirty” and possibly unsafe for the owners to drive until decontaminated. It is hard to believe the evacuating public will be amenable at all to losing their personal transportation for any length of time.

19. It is unfortunate that this new guidance document on utility PARs for General Emergency did not also address the unique considerations that will be necessary for special facilities that would be extremely difficult and time consuming to evacuate. These would include large penal institutions like state and federal prisons and long-term care facilities that provide services for non-ambulatory, severely dependent individuals. It will not be at all a simple matter to evacuate a state prison with a population in the thousands. In addition to finding a new place to house them it also requires enormous additional security personnel and is dependent on non-dedicated transportation assets that may exist on paper in the form of MOUs, but in reality have never been required to prove they will be available for a real event. Hardening the facilities and sheltering the prisoners for the duration of the event may be a much more practical and viable option than a plan for evacuation that is based on unguaranteed and unproven hopes. Likewise some long term care facilities have residents that could easily be put at higher risk by being moved than by sheltering in place. At minimum we can expect gathering the proper vehicles and care providers necessary to successfully evacuate these patients would take significantly longer than the evacuation of the general public. This portion of the population would also include hospitals

where it may simply be impossible to move patients that are in intensive care or surgery. Instead of spending another 30-years endlessly debating and massaging what should be included in an OROs public messages it would be much more helpful if the NRC provided some scientifically-based recommendations to help OROs address these tougher, still unresolved issues concerning the small percentage of the population that is basically incapable of evacuating.

20. Finally, in spite of the criticisms this document is a welcome change and a breath of fresh thinking. Instead of remaining endlessly stuck in a 1979, post-TMI mindset it is refreshing to see a document that offers new ideas and ways of coping with a nuclear power plant incident. Though some may legitimately question the accuracy of the focus group and telephone survey results it cannot be denied that the recommendations included in this document provide a basis to develop new responses that will better mitigate the incident and enhance the protection of the general public. Having the utilities and OROs jointly develop PAR logic diagrams that are congruent with ORO policies and procedures to protect the public has been long overdue and should have a clarifying effect on response measures. In the same vein, things like early dismissal of schools will do much to quickly reunite families and enhance evacuations should they later become necessary.

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