

NEI Protective Action Strategy Task Force
Comments on Draft NUREG 0654 Supplement 3 (Rev. 0) (ML090820416)

Draft NUREG 0654 Supplement 3 Page and Section	NEI Task Force Comments
General Comments	Proposed guidance needs to be considerate of FEMA, DHS and EPA issues. Development should involve those federal agencies. (example: updating EPA 400). Suggest that the narrative indicate that this process took place.
	Significant Protective Action Strategy (PAS) revision is premature given the current state SOARCA. Notably, inclusion of Large Early Release (LER), where SOARCA says that LER is a highly unlikely occurrence. Suggest adding an explanation or perspective or delay the proposed until SOARCA is complete and the knowledge from that study can be applied.
	PAS is based on 90% Evacuation Time Estimate (ETE), whereas ETE rulemaking states that 90% and 100% must be considered. Licensees may not have these values. Suggest clarification.
	Since ETE data won't be available until 2011, implementation of the revised PAS must coincide with that, or will it be expected that licensees revise ETE's prior to new census data? Suggest that implementation guidance and schedule address this.
Section 1.0	Three GE accidents are not well described. Suggest providing references.
	The GE accident conditions are not reflective of actual road network structures. Suggest that study should have used actual versus hypothetical road networks.
	The second paragraph states that "...the ACRS recommends... "However, the proposed process appears more complicated than the current. Examples: conferring with ORO's (in an emergency), GE conditions remain (how is this determined?). Suggest that the process be scrubbed to remove complexity, clarifying notes be added in the narrative and that an appropriately rigorous training process be included in the rollout.
	Paragraph 7, Precautionary Protective Actions (PA) are examples of what are currently called precautionary options,

Draft NUREG 0654 Supplement 3 Page and Section	NEI Task Force Comments
	<p>which do not reduce dose. These are not PA's. These should be determined and implemented by the ORO's, not the licensees. Suggest that the current terminology ("initial precautionary options" or something similar) be used in place or "precautionary protective actions".</p> <p>Paragraph 7, second bullet: Assumes high Protection Factor, which may not be valid due to variations in the availability of robust buildings.</p>
<p>Section 2.0 first paragraph</p>	<p>No guidance or process is described for approval. What level of approval is needed? What 54q considerations are there? Does everyone have to submit? Suggest that this process be described in detail.</p> <p>The flowchart contains decisions or processes that may not be able to be answered in the Control Room within 15 min due to its complexity and expertise required for interpretation. Also, the guidance contains some decisions to be made well into the emergency (3 hours). Suggest that this be piloted prior to finalizing the guidance in order to determine process choke points and resolve.</p>
<p>Section 1.1 4th paragraph</p>	<p>What happens if ORO doesn't agree? Suggest this issue be addressed in the narrative.</p>
<p>Section 2.1</p>	<p>"Probabilistic perspective in a qualitative manner"? The meaning of this is not clear. Suggest clarifying.</p>
<p>Section 2.3</p>	<p>The concept of Shelter in Place (SIP) needs to consider the benefits as well as the risks of all effects of the PA, including effects of implementing (such as shutting off ventilation in adverse weather). There may be substantial consequences of taking a PA that are not discussed. Suggest risks/benefits be discussed in the narrative.</p>
<p>Section 2.4</p>	<p>This section blurs the distinction between onsite and offsite responsibilities. Suggest that this section be revised to reflect current areas of responsibilities for onsite and offsite ORO's.</p> <p>Paragraph 1 second sentence: "However, it was apparent for some scenarios analyzed in the PAR Study that precautionary protective actions taken earlier than a General Emergency (GE) can reduce consequences." Suggesting adding "...if circumstances degrade to the point that a GE ensues.", since the sentence is only valid if the accident sequence includes a GE.</p>

Draft NUREG 0654 Supplement 3 Page and Section	NEI Task Force Comments
Section 2.5	Guidance identifies the need for sites to perform a wind persistence analysis to determine if the site specific PAR Logic Diagram should include additional downwind sectors for the initial protective action. Suggest guidance needs to be added to describe the details and application of wind persistence study.
Section 3.0	4th paragraph: Where in the diagram are the weather conditions reflected? It is unclear regarding the conditions assumed in the development of the diagram. If the diagram reflects typical weather conditions, how would it change under adverse conditions? Suggest clarifying in the narrative.
	2 nd paragraph: define high density (average density has already been defined).
	5 th paragraph: last sentence ("Licensees may perform a site specific analysis to determine if other criteria are more appropriate. This must be submitted to NRC for review and approval in accordance with 10 CFR 50.4 before it is implemented in protective action procedures") Suggest explaining this and providing example actions.
Attachment 1 Is the 2 mile 90% ETE > 3 hrs?	Document infers that ETE > 3 hrs = high population. This may not be true. Suggest a more accurate method for determining high population sites or clarifying the basis for the proposed guidance.
Attachment 1 Do impediments to evacuations exist?	Note 2, 3 rd bullet, last sentence: It is unclear what this is meant to convey. Suggest clarification.
Attachment 1	Note 4 bullet 1: Suggest defining "adjacent sectors"
	Note 9: The statement "Significant precipitation, inversions, or calm 'no wind' conditions may provide a basis for immediate evacuation because these conditions would reduce risk" is not always correct (releases below an inversion cap adds additional radiation exposure pathways). Suggest correcting or clarifying.

Draft NUREG 0654 Supplement 3 Page and Section	NEI Task Force Comments
SIP 2 mile radius (9), evacuate 2-5 mile downwind (4)...	
	Note 9: Should the listed met conditions (Significant precipitation, inversions, or calm 'no wind' conditions may provide a basis...") add decision blocks to the flowchart? If not, how are they accommodated in short timeframes? Suggest correcting or clarifying.
	Note 9: The assumption that dose decreases with distance is not always correct. Sites with elevated stack may result in lower doses close in (no inhalation or immersion pathway), while non-stack (vent) releases include these pathways and may result in higher doses close in. Suggest correcting or clarifying.
	What if there are impediments within 2-5 miles? Suggest correcting or clarifying.
Attachment 1 When safe to do so, evacuate the 2 mile radius (10)	This action is expected to be implemented hours after the SIP action. Suggest correcting or clarifying.
	Suggest defining or discussing "safe".
	Seems to imply that we have to develop methods to calculate shelter vs evacuation dose. Suggest correcting or clarifying.
	Should radiological considerations be added? (Example, If PAGs are/projected to be exceeded and if safe to do so...). Consider removing the box.
Attachment 1 Evacuate 2 mile radius and SIP (3) 5 miles downwind (4) all others	There is not sufficient justification for the sheltering 2 miles and beyond downwind described in this block. Suggest correcting or clarifying.
	There is no discussion of 5-10 mile zone. Suggest adding a discussion in the narrative.

Draft NUREG 0654 Supplement 3 Page and Section	NEI Task Force Comments
heightened preparations (5)	
Attachment 1 At T=X, (7) evacuate 2-5 miles downwind (4) Attachment 1 At T=X, (7) evacuate 2-5 miles downwind (4)	<p>X= the time for the inner 2 mile population to exit the 10 mile EPZ. Thus, this note (7) is too simplistic and inaccurate. There is a dynamic component in which some of the residents within 2 miles have passed beyond 2 miles but are not yet beyond 10 miles. Also some of these affected population members have moved laterally and are outside of the plume even if they are still within 2 miles. Suggest correcting or clarifying.</p> <p>The guidance states: "The shift staff is expected to make this PAR without conferring with OROs...". By the time T=X, where X = 90th percentile ETE for the 2 mile ring, we would expect that the augmented ERO would be in place relieving the on shift personnel from the need to make PARs. Suggest revising to state "The licensee ERO is expected to make...".</p>
Attachment 1 Continue Assessment (11)	<p>There is no discussion regarding the ring beyond 5 miles to 10 miles – when and under what conditions should expansion to this ring be considered. Suggest correcting or clarifying.</p> <p>If dose assessment exceeds PAGs, should you immediately evacuate the affected areas, despite any previous PAR's? (should you evacuate ERPAs due to dose that are currently sheltered?). Suggest correcting or clarifying.</p> <p>We don't understand the second bullet. It appears to be covered by the first bullet. Suggest correcting or clarifying.</p>
Attachment 1 SIP (3) 2 mile	<p>Why shelter all just because of an impediment in one area? Suggest correcting or clarifying.</p> <p>No criteria or action to relieve the sheltering for long lasting impediments. Suggest correcting or clarifying.</p>

Draft NUREG 0654 Supplement 3 Page and Section	NEI Task Force Comments
radius and 5 miles downwind (4) all others heightened preparedness (5)	
Attachment 1 Continue assessment maintain PAR	No guidance is provided. Suggest correcting or clarifying.
Attachment 1 Impediment removed (8)	<p>Regarding "In the case where the impediment was a hostile action event: Within 1 hour of the initial PAR, the licensee must discuss with OROs whether the sheltering PAR should be changed.": What is the basis for the 1 hour. Suggest providing explanation.</p> <p>The guidance provides a variety of methods for assessing impediments. In one case, the ORO and licensee discuss (HAB impediment), in one case the decision is the ORO only (evac support impediment). This seems inconsistent. Suggest revising or clarifying. Suggest resolving the above, the guidance should be much less prescriptive on impediment coordination. (This simple step has some complex actions in the note!)</p>
Attachment 1 Confer with ORO's...	The Licensee (recommend) and ORO (decide) process should be used. (Not confer). Suggest revising.