

## EP Rule Implementation Matrix

This matrix should be used as a tool by NRC staff to verify and record that 50.54(q) changes to emergency plans are updated to include the most recent rule changes in Part 50, Appendix E.

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IMPLEMENTATION SCHEDULE FOR: _____			
RULE CHANGE	IMPLEMENTATION DATE	DATE COMPLETED	
Evacuation Time Estimates	Yearly		
Emergency Action Levels for Security Events	6/20/2012		
Emergency Declaration Timeliness	6/20/2012		
Protective Actions for Onsite Personnel	6/20/2012		
Emergency Operations Facilities	6/20/2012		
ERO Augmentation at Alternative Facilities <ul style="list-style-type: none"> <li>Alternative facilities should have capability to serve as staging area for the augmented ERO</li> <li>Alternative facilities should have capability to communicate with the EOF, control room, and plant security</li> </ul>	6/20/2012		
On-Shift Staffing Analysis	12/24/2012		
Licensee Coordination with ORO During Hostile Actions	6/23/2014		
ERO Augmentation at Alternative Facilities <ul style="list-style-type: none"> <li>Alternative facilities should have capability to perform offsite notifications</li> <li>Alternative facilities should have capability for conducting engineering assessment activities, including damage control team planning and preparation</li> </ul>	12/23/2014		
Backup Means for Alert and Notification System*	6/22/2015		

\* If FEMA has approved a site's alert and notification design report, which includes a backup ANS capability, as of December 23, 2011, then the backup system must be implemented by December 24, 2012. If the alert and notification report does not include a backup alert and notification capability, then a revision of the alert and notification design report must be submitted to FEMA for review by June 24, 2013 and implemented within 365 days of FEMA approval. By June 22, 2015 all sites must have implemented a backup alert and notification system.

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1. On-Shift Staffing Analysis (NUREG 0654, Section II.B.)						
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. Many of the provisions in Section IV also apply to Part 50 non-power reactor licensees (76 FR 72580).						
<b>App. E., Sec. IV, A.9.</b> Requires nuclear power licensees to provide a detailed analysis demonstrating that on-shift personnel assigned emergency plan implementation functions are not assigned other responsibilities that would potentially overburden them and prevent the timely performance of their emergency plan functions. Licensees must ensure that the duties assigned to on-shift staff are reasonable for one person to perform and are not so burdensome as to negatively impact emergency response.						
Must be implemented by December 24, 2012						
			Y	N	DATE	COMMENTS
Define the events that will be used in the detailed staffing analysis. The events should include:						
1. Postulated DBAs (Condition IV events) presented in the FSAR, as updated, and which would result in an emergency declaration.			<input type="checkbox"/>	<input type="checkbox"/>		
a. At least one DBA should result in the declaration of a General Emergency and radiological doses to the public that exceed the EPA PAGs and necessitate licensee PARs.			<input type="checkbox"/>	<input type="checkbox"/>		
2. Station DBT			<input type="checkbox"/>	<input type="checkbox"/>		
NOTE: With respect to the DBT analysis, licensees may assume that the hostile threat is neutralized with no adverse consequences to plant safety. However, licensees should ensure that sufficient staff is available to simultaneously implement both the emergency plan and the security plan in a DBT environment to include, as a minimum, the potential for restricted movement of site personnel.						
3. Response actions for an “aircraft probable threat” in accordance with 10 CFR 50.54(hh)(1) and as discussed in RG 1.214; and			<input type="checkbox"/>	<input type="checkbox"/>		
4. Control room fire leading to evacuation and remote shutdown, as referenced in IN 95-48.			<input type="checkbox"/>	<input type="checkbox"/>		

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<p>5. Were detailed analyses performed for other site-specific events (e.g., SBO, Appendix R fire response, SAMGs) based on site-specific commitments or unique licensing attributes that would impact on-shift staffing considerations?</p> <p><i>NOTE: If site-specific events were not included, was sufficient rational provided as to why these events were not included?</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>For each defined event perform a detailed analysis, such as a job/task analysis (JTA) or time-motion study, which addresses the following concerns:</p>			
<p>1. All on-shift staff positions should be evaluated, even if they have no known collateral duties, to ensure that they can perform the tasks assigned to them.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>2. On-shift staff must be capable of:</p>			
<p>a. Taking emergency actions to safely shut down the reactor,</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>b. Mitigating accident consequences,</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>c. Notifying augmented ERO staff and OROs,</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>d. Determining PARs for site personnel and the public,</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>e. Performing firefighting duties, and providing medical assistance if needed, and</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>f. Must not be assigned responsibilities that could detract from the performance of their primary emergency plan functions.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>3. The analysis should consider the major functional areas and tasks listed in NUREG-0654, Table B-1, when performing the detailed analysis.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>For events used in the staffing analysis that did not specify the performance of some major function or task (e.g., repair and corrective actions, rescue operations and first aid), does the licensee's analysis specify the resources available to perform these functions and tasks, if needed?</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>Use the detailed analyses to determine if the current minimum on-shift staff can adequately perform all required emergency response actions in a timely manner until augmenting ERO staff is required to arrive.</p>	<input type="checkbox"/>	<input type="checkbox"/>	
<p><i>NOTE: Additional duties assigned to on-shift staff may be acceptable provided that those duties do not detract from the timely performance of their primary duties.</i></p>	<input type="checkbox"/>	<input type="checkbox"/>	

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Identify positions which have assigned duties that could affect the timely performance of an emergency response function/task. Licensees should promptly enter any such results into their corrective action program for resolution.	<input type="checkbox"/>	<input type="checkbox"/>		
For the potential aircraft threat, perform a detailed analysis to determine if the current on-shift staff can adequately perform all emergency response actions required by the site-specific procedures for an "aircraft probable threat."	<input type="checkbox"/>	<input type="checkbox"/>		
1. Analysis should include all emergency response actions taken prior to an aircraft impact in accordance with RG 1.214 for an aircraft threat that is greater than 5 minutes, but less than 30 minutes, from the site.	<input type="checkbox"/>	<input type="checkbox"/>		
2. Should consider the dispersal of the site fire brigade away from target areas for firefighting.	<input type="checkbox"/>	<input type="checkbox"/>		
<b>Related Guidance</b> <ul style="list-style-type: none"> <li>• NUREG-0654, Section II.B, "Onsite Emergency Organization."</li> <li>• NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."</li> </ul>				

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2. Licensee Coordination with ORO During Hostile Actions (NUREG 0654, Section II.C.)				
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. The NRC has excluded non-power reactors from the definition of "hostile action" at this time until a regulatory basis is developed to support inclusion of non-power reactors in that definition. However, non-power reactor licensees are still required to identify ORO resources that would respond to the facility in an emergency and the assistance licensees expect from them (76 FR 72580, NSIR/DPR-ISG-01 pg. 19).				
<b>App. E., Sec. IV, A. 7.</b> Requires the licensee to identify and provide a description of the assistance expected from State, Local, and federal agencies with responsibilities for coping with emergencies. Hostile actions must be integrated into the analysis of potential emergencies that the licensee discusses within its emergency plan..				
Must be implemented by <b>June 23, 2014</b>				
	Y	N	DATE	COMMENTS
Licensee should review the onsite emergency plan to determine the type and extent of ORO resources needed to support onsite response activities during an emergency, <u>including hostile action</u> .	<input type="checkbox"/>	<input type="checkbox"/>		
Licensee should review arrangements with State, local, and Federal agencies to verify that the type of assistance to be provided by each agency is clearly identified and described to support onsite response activities. Local agencies should include LLEA, firefighting, and medical assistance.	<input type="checkbox"/>	<input type="checkbox"/>		
Licensee should update existing arrangements as needed to clarify the type of assistance to be provided by an agency or to address any shortfalls for support of onsite response activities that have been identified.	<input type="checkbox"/>	<input type="checkbox"/>		
Licensee should arrange for additional ORO resources as needed to address any remaining shortfalls.  <i>NOTE: Licensee should consider expanding the use of mutual assistance agreements with neighboring authorities to identify and plan for additional resources. Licensee should consider the reassignment of ORO functions to other than LLEAs, and other site specific measures (NSIR/DPR-ISG-01 pg. 19).</i>	<input type="checkbox"/>	<input type="checkbox"/>		
<b>Related Guidance</b>				
<ul style="list-style-type: none"> <li>• NUREG-0654, Section II.C, "Emergency Response Support and Resources."</li> <li>• NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."</li> </ul>				

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<h3>3. Emergency Action Levels for Security Events (NUREG 0654, Section II.D.)</h3> <p>Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. Many of the provisions in Section IV also apply to Part 50 non-power reactor licensees (76 FR 72580). The NRC has excluded non-power reactors from the definition of "hostile action" at this time until a regulatory basis is developed to support inclusion of non-power reactors in that definition. However, non-power reactor licensees are still required to identify ORO resources that would respond to the facility in an emergency and the assistance licensees expect from them (76 FR 72580).</p>				
<p><b>App. E, IV.B.</b> Nuclear power reactor licensees must consider hostile actions, which may adversely affect the nuclear power plant, in their EAL schemes.</p>				
<b>Must be implemented by June 20, 2012</b>		<b>Y</b>	<b>N</b>	<b>DATE</b>
Initial EALs shall be discussed and agreed on by the applicant or licensee and state and local governmental authorities, and <u>approved by the NRC</u> .		<input type="checkbox"/>	<input type="checkbox"/>	
<i>NOTE: Thereafter, EALs shall be reviewed with the State and local governmental authorities on an annual basis.</i>				
<b>REFERENCES</b>				
<ul style="list-style-type: none"><li>Bulletin 2005-02 (BL-05-02), "Emergency Preparedness and Response Actions for Security-Based Events."</li><li>RIS 2006-12, "Endorsement of Nuclear Energy Institute Guidance 'Enhancements to Emergency Preparedness Programs for Hostile Action,' " dated July 19, 2006.</li><li>NEI 99-01, "Methodology for the Development of Emergency Action Levels," Revision 5, February 2008 (ADAMS Accession No. ML080450149).</li><li>NEI 07-01, "Methodology for the Development of Emergency Action Levels Advanced Passive Light Water Reactors," Revision 0, July 2009 (ADAMS Accession No. ML092030210).</li></ul>				

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4. Emergency Declaration Timeliness (NUREG 0654, Section II.D.)				
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. <b>App. E, IV.C.2.</b> does not apply to non-power reactors. (76 FR 72580, 72583).				
<b>App. E, IV.C.2.</b> Nuclear power reactor licensees shall establish and maintain the capability to assess, classify, and declare an emergency condition within 15 minutes after the availability of indications to plant operators that an emergency action level has been exceeded.				
Must be implemented by June 20, 2012		Y	N	DATE
<p>1. The NRC considers the 15-minute criterion to commence when plant instrumentation, plant alarms, computer displays, or incoming verbal reports that correspond to an EAL first become available to any plant operator.</p> <p><i>NOTE: The 15-minute criterion is not to be construed as a grace period in which a licensee may attempt to restore plant conditions to avoid declaring an EAL that has already been exceeded.</i></p> <p><i>NOTE: This statement does not preclude licensees from acting to correct or mitigate an off-normal condition, but once an EAL has been recognized as being exceeded, the emergency declaration shall be made promptly without waiting for the 15-minute period to elapse.</i></p> <p><i>NOTE: This is particularly the case when the EAL threshold is exceeded based on occurrence of a condition, rather than the duration of a condition.</i></p>		<input type="checkbox"/>	<input type="checkbox"/>	
<p>The 15-minute period encompasses all assessment, classification, and declaration actions associated with making an emergency declaration from the first availability of a plant indication or receipt of a report of an off-normal condition by plant operators up to and including the declaration of the emergency.</p> <p><i>NOTE: If classifications and declarations are performed away from the CR, all delays incurred in transferring information from the CR (where the alarms, indications, and reports are first received) to the ERF (at which declarations are made) must be included within the 15-minute criterion.</i></p>		<input type="checkbox"/>	<input type="checkbox"/>	

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Validation or confirmation of plant indications, or reports to the plant operators, is to be accomplished within the 15-minute period as part of the assessment.  <i>NOTE: Since this validation or confirmation is being performed to determine the veracity of an alarm, indication, or report, the 15-minute period starts with the availability of the alarm, indication, or report, and not the completion of the validation or confirmation, because the former is the time that the information was first available.</i>	<input type="checkbox"/>	<input type="checkbox"/>		
In limited cases where EAL thresholds are related to the results of analyses (e.g., dose assessments, chemistry sampling, and/or inspections) that are necessary to ascertain whether a numerical EAL threshold has been exceeded, rather than confirming or verifying an alarm or a received report, the 15-minute declaration period starts with the availability of analysis results that show the threshold to be exceeded; this is the time that the information is first available.	<input type="checkbox"/>	<input type="checkbox"/>		
In limited cases where EAL thresholds are related to the results of analyses (e.g., dose assessments, chemistry sampling, and/or inspections) that are necessary to ascertain whether a numerical EAL threshold has been exceeded, licensees are expected to establish the capability to initiate and complete these analyses with a <u>reasonable sense of urgency</u> . For example, if a particular skill set is necessary to assess one or more EAL thresholds, that expertise should be available on-shift.	<input type="checkbox"/>	<input type="checkbox"/>		
This 15-minute criterion ends as soon as the nuclear power reactor licensee determines that an EAL has been exceeded and upon identification of the appropriate ECL and when the licensee makes the emergency declaration.	<input type="checkbox"/>	<input type="checkbox"/>		
The licensee must promptly declare the emergency condition as soon as possible following the identification of the appropriate ECL.  <i>NOTE: As used here, “promptly” means the next available opportunity unimpeded by activities not related to the emergency declaration, unless such activities are necessary for protecting health and safety.</i>	<input type="checkbox"/>	<input type="checkbox"/>		
For EAL thresholds that specify a duration of the off-normal condition, the NRC expects that the emergency declaration process run concurrently with the specified threshold duration. Once the off-normal condition has existed for the duration specified in the EAL, no further effort on this declaration is necessary—the EAL has been exceeded, and no further assessment is necessary. The emergency declaration must be made promptly.	<input type="checkbox"/>	<input type="checkbox"/>		



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A delay in emergency declaration beyond 15 minutes may be necessary. Such delays could be found compliant if the situation meets all of the following conditions:				
1. The delay has no significant impact on the implementation of adequate measures to protect the public health and safety.	<input type="checkbox"/>	<input type="checkbox"/>		
2. The delay was caused by a licensee actively performing another action immediately needed to protect the public health and safety such that a delay in declaration qualitatively represents the lesser risk.	<input type="checkbox"/>	<input type="checkbox"/>		
3. The cause of the delay was not reasonably within the licensee's ability to foresee and prevent.	<input type="checkbox"/>	<input type="checkbox"/>		
4. The delay did not deny OROs the opportunity to implement actions to protect the public health and safety.	<input type="checkbox"/>	<input type="checkbox"/>		
<b>REFERENCES</b>				
<ul style="list-style-type: none"> <li>• NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."</li> </ul>				

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### 5. Backup Means for Alert and Notification System (NUREG 0654, Section II.E.)

Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. Many of the provisions in Section IV also apply to Part 50 non-power reactor licensees (76 FR 72580).					
<b>App. E., Sec. IV, D.3.</b> Requires the alert and notification system has a backup system capable of being used in the event the primary method for alerts and notification is unavailable during an emergency.					
<b>Must be implemented by June 22, 2015<sup>1</sup></b>					
Licensee must be able to alert and notify essentially 100% of the population within the entire plume exposure EPZ.		Y	N	DATE	COMMENTS
<p><i>NOTE: System can be designed using a phased approach. Populations most at risk (e.g., within 2 miles) are alerted and notified first, followed by alerting and notification of people in less immediately affected areas (e.g., 2 to 5 miles, followed by downwind 5 to 10 miles, and finally the remaining population as directed by authorities).</i></p> <p><i>NOTE: System can be designed so that it can be implemented in specific areas where the primary system was affected.</i></p>		<input type="checkbox"/>	<input type="checkbox"/>		
<p>The backup means of alert and notification shall be conducted within a reasonable time, with a recommended goal of 45 minutes (NUREG-0654/FEMA-REP-1 Rev. 1 Supp. 4, p. 14).</p> <p><i>NOTE: Backup system need not meet the 15 minute requirement of the primary system.</i></p>		<input type="checkbox"/>	<input type="checkbox"/>		
Personnel and resources required to implement the backup methods will be available during any type of emergency (including hostile action), and the designated personnel must know how to implement backup methods (76 FR 72585).		<input type="checkbox"/>	<input type="checkbox"/>		

<sup>1</sup> If FEMA has approved a site's alert and notification design report, which includes a backup ANS capability, as of December 23, 2011, then the backup system must be implemented by December 24, 2012. If the alert and notification report does not include a backup alert and notification capability, then a revision of the alert and notification design report must be submitted to FEMA for review by June 24, 2013 and implemented within 365 days of FEMA approval. By June 22, 2015 all sites must have implemented a backup alert and notification system.

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### **Related Guidance**

- NUREG-0654/FEMA-REP-1, Rev.1., "Supplement 4: Criteria for National Preparedness Initiative Integration, Exercise Enhancement, and Backup Alert and Notification Systems."
- FEMA-REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants."
- NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."

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6. Emergency Operations Facilities (NUREG 0654, Section II.H.)			
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. Many of the provisions in Section IV also apply to Part 50 non-power reactor licensees (76 FR 72580). The NRC has excluded non-power reactors from the definition of "hostile action" at this time until a regulatory basis is developed to support inclusion of non-power reactors in that definition. However, non-power reactor licensees are still required to identify ORO resources that would respond to the facility in an emergency and the assistance licensees expect from them (76 FR 72580, NSIR/DPR-ISG-01 pg. 19).			
<b>App. E., Sec. IV, E.8.b.</b> Establishes distance criteria for a licensee's emergency operations facility. <b>App. E., Sec. IV, E.8.c.</b> Provides performance based criteria applicable to all EOFs. <b>App. E., Sec. IV, E.8.d.</b> Requires the licensee to identify an alternative facility (or facilities) that would be accessible even if the site is under threat of or experiencing hostile action, to function as staging areas for augmentation of ERO staff during hostile action to minimize delays in emergency response and provide for a swift coordinated augmented response.			
	Y	N	DATE
			COMMENTS
1. EOF is located within 10 to 25 miles of each nuclear reactor it serves. (If YES skip #2 and #3. If NO see #2.)	<input type="checkbox"/>	<input type="checkbox"/>	
2. If EOF is located less than 10 miles from reactor, then <u>backup facility</u> must be provided within 10 to 25 miles from reactor. (If YES skip #3. If NO see #3.)	<input type="checkbox"/>	<input type="checkbox"/>	
3. If EOF is located more than 25 miles from reactor, which <u>requires prior commission approval</u> through a license amendment, then the following criteria must be met:			
a. Site should not adversely impact the licensee and offsite responders ability to fulfill their responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	
b. Provisions for locating NRC and offsite responders closer to the nuclear power reactor site must be made so they can interact face to-face with personnel going to and leaving the site for briefings and debriefings.	<input type="checkbox"/>	<input type="checkbox"/>	
c. This site should include space for NRC site team and Federal, State, and Local responders.	<input type="checkbox"/>	<input type="checkbox"/>	
i. At a minimum, conference area with whiteboards should be provided (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>	
d. The site should include additional space for conducting briefings with emergency response personnel.	<input type="checkbox"/>	<input type="checkbox"/>	
e. The site should include the ability to communicate with other licensee and offsite emergency response facilities.	<input type="checkbox"/>	<input type="checkbox"/>	

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i. Site ERO telephone contact lists should be available (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>		
f. The site should have access to plant data and radiological information.	<input type="checkbox"/>	<input type="checkbox"/>		
g. The site should have access to computers with internet access (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>		
h. The site should have access to copying equipment and office supplies.	<input type="checkbox"/>	<input type="checkbox"/>		
i. The site should have radiation monitoring capability (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>		
Emergency operations facilities must meet the following criteria by <b>June 20, 2012</b> :				
1. Capability to obtain and display plant data and radiological information for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves.	<input type="checkbox"/>	<input type="checkbox"/>		
2. Capability to analyze plant technical information, and if EOF serves more than one type of reactor, staff must be capable of understanding and translating different types of data.	<input type="checkbox"/>	<input type="checkbox"/>		
3. Capability to provide technical briefings on event conditions.	<input type="checkbox"/>	<input type="checkbox"/>		
4. Capability to provide prognosis to licensee and OROs for each reactor at a nuclear power reactor site and for each nuclear power reactor site that the facility serves.	<input type="checkbox"/>	<input type="checkbox"/>		
5. Capability to support response to events occurring simultaneously at more than one nuclear power reactor site if the EOF serves more than one site.	<input type="checkbox"/>	<input type="checkbox"/>		
6. Ability to notify offsite agencies (when performed at EOF per licensee emergency plan), (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>		
7. Coordination of event, plant, and response information provided to public information staff for dissemination to the media and public (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>		
8. Ability to staff and activate the facility within time frames and at emergency classification levels defined in the licensee emergency plan (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>		
9. In addition to coordinating emergency response activities with Federal, State, and local agencies, the EOF should also be able to coordinate with Tribal governments (NUREG-0696, Section 4, Subsection 4.1).	<input type="checkbox"/>	<input type="checkbox"/>		

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### **REFERENCES**

- NUREG-0654, Section II.H, "Emergency Facilities and Equipment."
- NUREG-0696, Section 4, "Emergency Operations Facility." Bulletin 2005-02 (BL-05-02), "Emergency Preparedness and Response Actions for Security-Based Events."
- NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."

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7. ERO Augmentation at Alternative Facilities (NUREG 0654, Section II.H.)			
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. Many of the provisions in Section IV also apply to Part 50 non-power reactor licensees (76 FR 72580). The NRC has excluded non-power reactors from the definition of "hostile action" at this time until a regulatory basis is developed to support inclusion of non-power reactors in that definition. However, non-power reactor licensees are still required to identify ORO resources that would respond to the facility in an emergency and the assistance licensees expect from them (76 FR 72580, NSIR/DPR-ISC-01 pg. 19).			
<b>App. E., Sec. IV, E.8.b.</b> Establishes distance criteria for a licensee's emergency operations facility. <b>App. E., Sec. IV, E.8.c.</b> Provides performance based criteria applicable to all EOFs. <b>App. E., Sec. IV, E.8.d.</b> Requires the licensee to identify an alternative facility (or facilities) that would be accessible even if the site is under threat of or experiencing hostile action, to function as staging areas for augmentation of ERO staff during hostile action to minimize delays in emergency response and provide for a swift coordinated augmented response.			
	Y	N	DATE
COMMENTS			
Licensee must designate an alternative facility (or facilities) that would be accessible if the site is under threat of or experiencing hostile action. Alternative facility would function as a staging area for augmentation of emergency response staff. Facility should have the following capabilities:	<input type="checkbox"/>	<input type="checkbox"/>	
1. Licensees can use the EOF (or other buildings, such as training centers, local EOC's, or other enclosed assembly areas) as the alternative facility for onsite ERO members if it is outside the owner-controlled area and within about 30 miles of the site. <b>June 20, 2012.</b>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Facility should be far enough from the site so that it is geographically separated from any hostile action against the site, yet close enough that staged responders can travel quickly to the site when it is deemed accessible by appropriate authorities. <b>June 20, 2012.</b>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Capability to communicate with the EOF, control room, and plant security. <b>June 20, 2012.</b>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Capability to serve as staging area for the augmented ERO. <b>June 20, 2012.</b>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Capability to perform offsite notifications. <b>December 23, 2014.</b>	<input type="checkbox"/>	<input type="checkbox"/>	
a. Alternative facility will be needed to perform these notifications within 15 minutes of a change in emergency classification level (ECL) or issuance of a PAR.	<input type="checkbox"/>	<input type="checkbox"/>	

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6. Capability for engineering assessment activities, including damage control team planning and preparation. <b>December, 23, 2014.</b>	<input type="checkbox"/>	<input type="checkbox"/>		
a. Should have capability to begin planning mitigation actions in order to minimize the delay in overall site response.	<input type="checkbox"/>	<input type="checkbox"/>		
b. Should be able to access up-to-date plant technical documentation, such as general plant drawings, system information, and plant procedures, to enable engineers and maintenance supervisors to do adequate response planning.	<input type="checkbox"/>	<input type="checkbox"/>		
c. Should consider equipping alternative facilities with phone systems and computer links to the site or other means to access plant data. However, licensees have flexibility in selecting the equipment or other means that would promote effective response planning from the alternative facilities on a site-specific basis.	<input type="checkbox"/>	<input type="checkbox"/>		
<b>REFERENCES</b>				
<ul style="list-style-type: none"> <li>NUREG-0654, Section II.H, "Emergency Facilities and Equipment."</li> <li>NUREG-0696, Section 4, "Emergency Operations Facility." Bulletin 2005-02 (BL-05-02), "Emergency Preparedness and Response Actions for Security-Based Events."</li> <li>NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."</li> </ul>				



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8. Protective Actions for Onsite Personnel (NUREG 0654, Section II.J.)				
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. The NRC has excluded non-power reactors from the definition of "hostile action" at this time until a regulatory basis is developed to support inclusion of non-power reactors in that definition. However, non-power reactor licensees are still required to identify ORO resources that would respond to the facility in an emergency and the assistance licensees expect from them (76 FR 72580, NSIR/DPR-ISG-01 pg. 19).				
<b>App. E., Sec. IV, I.</b> Requires the licensee to implement a range of protective actions to protect onsite personnel during hostile action. Ensure the continued ability of the licensee to safely shut down the reactor and perform the functions of the licensee's emergency plan.				
Must be implemented by <b>June 20, 2012</b>	Y	N	DATE	COMMENTS
Site management must have capacity to be continually aware of the site security status and avoid actions that would potentially place onsite personnel in a dangerous environment.	<input type="checkbox"/>	<input type="checkbox"/>		
Licensee should address different contingencies for onsite protective actions and clearly distinguish between actions taken for a credible threat versus an active hostile action.	<input type="checkbox"/>	<input type="checkbox"/>		
Licensee should develop public address announcements for each type of hostile action threat that inform personnel to:	<input type="checkbox"/>	<input type="checkbox"/>		
1. Evacuate target buildings to a different location, evacuate site, or shelter-in-place (See RG 1.214, Section C.4). <i>NOTE: If evacuating personnel from site, licensee must continue to defend security gates.</i> <i>NOTE: If evacuating to a different location on-site or sheltering-in-place, licensee should consider proximity to potential targets.</i>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Give instructions to specific site teams or departments (fire brigade, licensed operators, etc.)	<input type="checkbox"/>	<input type="checkbox"/>		
Should develop procedures for dispersal and protection of critical personnel (See RG 1.214, Section C.7).	<input type="checkbox"/>	<input type="checkbox"/>		
Identify personnel who are critical to mitigate hostile action consequences.	<input type="checkbox"/>	<input type="checkbox"/>		
Identify suitable locations outside power blocks or protected areas to which those personnel can be repositioned to increase their survivability.	<input type="checkbox"/>	<input type="checkbox"/>		
Licensee should revise site accountability procedures and make arrangements for accounting of personnel after a hostile action.	<input type="checkbox"/>	<input type="checkbox"/>		

## EP Rule Implementation Matrix

Licensee should develop a decision-making tool to aid shift manager to rapidly determine the best protective actions for onsite personnel (NSIR/DPR-ISG-01 pg. 19).	<input type="checkbox"/>	<input type="checkbox"/>		
<p><b>Related Guidance</b></p> <ul style="list-style-type: none"> <li>• NUREG-0654, Section II.J, "Protective Response."</li> <li>• Bulletin 2005-02 (BL-05-02), "Emergency Preparedness and Response Actions for Security-Based Events."</li> <li>• RG 1.214, "Response Strategies for Potential Aircraft Threats," (issued September 2009, ADAMS Accession No. ML091750297, limited availability, classified as Official Use Only – Security Related Information).</li> <li>• NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."</li> </ul>				

## EP Rule Implementation Matrix

9. Evacuation Time Estimates (NUREG 0654, Section II.J.)				
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. Many of the provisions in Section IV also apply to Part 50 non-power reactor licensees (76 FR 72580).				
<b>App. E., Sec. IV, 1.</b> Requires nuclear power reactor licensees revise their ETEs when the U.S. Census Bureau decennial census data is available. Furthermore, the licensee is required to annually review population changes within their EPZs and update ETEs to reflect any changes that may impact ETEs. The updated ETEs will allow for more effective development of public protective action strategies and review of evacuation planning. <b>Reviews of actual ETE updates submitted by licensees under 10 CFR 50.4 will be performed using Appendix B to NUREG/CR-7002.</b>				
	Y	N	DATE	COMMENTS
Update ETE's within 365 days of the release of U.S. Census Bureau decennial census data or the effective date of this final rule.	<input type="checkbox"/>	<input type="checkbox"/>		
During years between decennial censuses, reactor licensees shall estimate EPZ permanent resident population changes using US Census bureau estimates and any other available data.	<input type="checkbox"/>	<input type="checkbox"/>		
These analyses should be done every year, but no later than 365 days from previous estimate.	<input type="checkbox"/>	<input type="checkbox"/>		
The licensee is required to update the ETE analysis to reflect the impact of a population change if:	<input type="checkbox"/>	<input type="checkbox"/>		
1. The longest ETE value for the 2-mile zone or 5-mile zone, including all affected Emergency Response Planning Areas (ERPAs), or for the entire 10-mile EPZ changes by 25 percent or 30 minutes, whichever is less from the licensee's currently NRC-approved or updated ETE.	<input type="checkbox"/>	<input type="checkbox"/>		
a. Updated ETE analysis must be submitted to NRC under § 50.4 no later than 365 days after the licensee's determination that the criteria for updating the ETE have been met; and b. At least 180 days before using it to form protective action recommendations and providing it to State and local government authorities for use in developing offsite protective action strategies.	<input type="checkbox"/>	<input type="checkbox"/>		
In accordance with 50.47(b)(10) applicants and licensees must ensure that protective action recommendations are revised to reflect any changes made to ETEs.	<input type="checkbox"/>	<input type="checkbox"/>		

## **EP Rule Implementation Matrix**

### **REFERENCES**

- NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies." (ML113010515)

## EP Rule Implementation Matrix

10. Challenging Drills and Exercises (NUREG 0654, Section II.N.)				
Applies to applicants for, and holders of, nuclear power reactor operating licenses under Part 50, combined licenses under Part 52, and certain early site permits under Part 52. Many of the provisions in Section IV also apply to Part 50 non-power reactor licensees (76 FR 72580).				
<b>App. E., Sec. IV, F.</b> Ensures that licensees develop and <b>maintain key skills</b> for emergency response. To accomplish this, the staff requires that drill and exercise scenarios encompass a <b>wide spectrum of events and conditions</b> to avoid anticipatory responses resulting from participant preconditioning.				
	Y	N	DATE	COMMENTS
(II.N.1.b.) An exercise shall demonstrate the key skills of response organizations to adequately respond to an incident scenario. The scenarios shall vary such that the major elements of the plans and preparedness organizations are exercised within an eight-year exercise cycle. Each scenario variation shall be demonstrated at least once during the eight-year exercise cycle and shall include, but not be limited to, the following:				
1. Hostile action directed at the plant site involving the integration of offsite resources with onsite response;	<input type="checkbox"/>	<input type="checkbox"/>		
2. An initial classification of or rapid escalation to a Site Area Emergency or General Emergency;	<input type="checkbox"/>	<input type="checkbox"/>		
3. No radiological release or an unplanned minimal radiological release that requires the site to declare a Site Area Emergency, but does not require declaration of a General Emergency. For this scenario variation the following conditions shall apply:	<input type="checkbox"/>	<input type="checkbox"/>		
a. The licensee is required to demonstrate the ability to respond to a no/minimal radiological release scenario at least once within the eight-year exercise cycle. State, Tribal and local response organizations have the option, and are encouraged, to participate jointly in this demonstration.	<input type="checkbox"/>	<input type="checkbox"/>		
b. When planning for a joint no/minimal radiological release exercise, affected State, Tribal and local jurisdictions, the licensee, and FEMA will identify offsite capabilities that may still need to be evaluated and agree upon appropriate alternative evaluation methods to satisfy FEMA's biennial criteria requirements. Alternative evaluation methods that could be considered during the extent of play negotiations include expansion of the exercise scenario, out of sequence activities, plan reviews, staff assistance visits or other means as described in FEMA guidance.	<input type="checkbox"/>	<input type="checkbox"/>		
c. If the offsite organizations elect not to participate in the licensee required minimal or no-release exercise, they will still be obligated to meet the exercise requirements as specified in 44 CFR § 350.9.	<input type="checkbox"/>	<input type="checkbox"/>		

## EP Rule Implementation Matrix

(II.N.1.c.) Provisions must be made to start a drill or exercise between 6:00 p.m. and 4:00 a.m. at least once in every eight-year exercise cycle. Some drills or exercises should be unannounced.	<input type="checkbox"/>	<input type="checkbox"/>		
(II.N.1.d.) An exercise shall include mobilization and implementation of State and local (as appropriate) personnel and resources adequate to verify the capability and response to a large radiological release requiring ingestion pathway protective actions beyond the 10 mile EPZ at least once every 8 years. Organizations shall specify who is responsible for the decision-making process. OROs shall reference or include the organization's procedures for making PADs and implementing protective actions based upon PAGs that are consistent with EPA recommendations, and the process for ensuring coordination of PADs with all applicable jurisdictions. <b>(Applies to State and Locals).</b>	<input type="checkbox"/>	<input type="checkbox"/>		
[II.N.2.e(2)] Health Physics Drills (2). Analysis of inplant liquid samples with actual elevated radiation levels shall be included in Health Physics drills by licensees annually.	<input type="checkbox"/>	<input type="checkbox"/>		
(II.N.4.) Biennial exercises shall be evaluated and critiqued as required. FEMA evaluators shall evaluate offsite emergency response organization performance in the biennial exercise in accordance with FEMA REP exercise methodology.	<input type="checkbox"/>	<input type="checkbox"/>		
<b>REFERENCES</b> <ul style="list-style-type: none"> <li>NUREG-0654/FEMA-REP-1, Rev. 1., "Supplement 4: Criteria for National Preparedness Initiative Integration, Exercise Enhancement, and Backup Alert and Notification Systems."</li> <li>NSIR/DPR-ISG-01, "Emergency Planning for Nuclear Power Plants."</li> </ul>				