

# UNITED STATES NUCLEAR REGULATORY COMMISSION

## PROPOSED RULE REGARDING

### ENHANCEMENTS TO EMERGENCY PREPAREDNESS REGULATIONS

#### Summary and Analysis of Public Comments on Draft Rule Language

The Nuclear Regulatory Commission (NRC or Commission) is proposing to amend certain emergency preparedness (EP) requirements in its regulations that govern domestic licensing of production and utilization facilities. The proposed amendments would codify certain generically applicable requirements similar to those previously imposed by Commission orders, update the EP regulations to include requirements previously and voluntarily initiated by nuclear power plant licensees, and amend other licensee emergency plan requirements based on a comprehensive review of the NRC's EP regulations and guidance. The proposed requirements would enhance the ability of licensee's in preparing to take and taking certain emergency preparedness and protective measures in the event of a radiological emergency; address, in part, security issues identified after the terrorist events of September 11, 2001; clarify regulations to effect consistent emergency plan implementation among licensees, and modify certain EP requirements to be more effective and efficient.

In an effort to conduct a rulemaking that is transparent and open to stakeholder participation, the NRC engaged stakeholders through various means during the development of this proposed rule. The NRC posted draft rule language on the e-rulemaking website, <http://www.regulations.gov>, on February 29, 2008, and solicited stakeholder comments. The NRC considered the comments received on the draft rule language in the process of developing the proposed rule.

The Commission received 3 comment letters. One comment letter was submitted by the State of Pennsylvania Bureau of Radiation Protection (SPA1, ML081690778), one was submitted by the Nuclear Energy Institute (NEI) (NEI1, ML081690809), and one was submitted by the Union of Concerned Scientists on behalf of several non-governmental organizations (UCS1, ML081840067). The NRC also received comments on issues that are outside the scope of this proposed rule and on regulatory provisions that are not proposed to be revised in this proposed rule. The NRC determined that these comments did not support changing the scope of the proposed rule.

In this document, the NRC presents a summary of the public comments received and the NRC's responses to the comments. The NRC summarizes the comments for conciseness and clarity. At the end of each comment, the NRC references the specific public comments. Specific comments are referred to in the form [XXX]-[YY.Z], where:

[XXX] represents the commenter abbreviation provided above (i.e., SPA1, NEI1, and UCS1), and

[YY.Z] represents the NRC-assigned sequential comment number. Note: Where specific comments were grouped together by the commenter but needed to be addressed separately, the NRC added a lower case alpha character to the comment number for uniqueness.

### **Addition of Communications Requirements**

**Comment:** One commenter suggested modifying the rule language of § 50.47(b)(8) to add a communications requirement and define which emergency facilities should be provided and maintained. The commenter suggested that this change should also be made to § 50.47(d)(4) along with the deletion of the word “onsite.” (SPA1 – 1)

**NRC response:** The NRC disagrees with the commenter. The commenter proposed additions to § 50.47 that would be too detailed for that provision of the regulations. Section 50.47(b) establishes the EP planning standards that nuclear power reactor licensees must meet, and § 50.47(d) provides the standards that nuclear power reactor licensees must meet for a license authorizing fuel loading and/or low power testing and training. However, Appendix E to Part 50 contains detailed licensee emergency plan implementation requirements. The NRC believes that the changes proposed by the commenter are unnecessary because the existing requirements in Section IV.E of Appendix E adequately address the commenter’s concerns.

**Comment:** One commenter suggested modifying the rule language of Appendix E.IV.A to require licensees to include in their emergency plan a description of the onsite response capabilities to comply and interface with organizations using the Incident Command System (ICS). The commenter also suggested modifying the rule language of Appendix E.IV.C to add a requirement for applicants or licensees to establish and maintain the capability to assess, assist in activation, develop and maintain procedural requirements and equipment maintenance of Incident Command Post(s) and staging area(s) licensee owned equipment and communication devices. The commenter also suggested modifying the rule language of Appendix E.IV.E, to add requirements for communications with the incident command post and staging area, as well as adding requirements to develop procedures and communication protocols for these facilities. The commenter also suggested adding requirements for emergency response organization (ERO) training on ICS. (SPA1 – 2, SPA1 – 3, SPA1 – 4)

**NRC response:** The NRC agrees with the commenter that licensees must effectively interact with offsite response organizations. The NRC believes that its current regulations require this interface to be effective. However, in section IV of the proposed rule Federal Register notice, the NRC specifically requests public comments regarding the inclusion of National Incident Management System/Incident Command System in licensee EP programs.

### **Emergency Operations Facility – Performance Based Approach**

**Comment:** One commenter agreed with the NRC’s proposed approach that the proposed language for § 50.47(b)(3) would specifically address only consolidation of EOFs, and would not change requirements for plants that do not elect to consolidate their EOFs. (NEI1 – 11.1a)

**NRC response:** The comment does not require a response.

### **Emergency Action Levels (EALs) for Hostile Action Events**

**Comment:** Regarding the proposed rule change to require licensee EALs to include hostile action events, one commenter agreed that the NRC should codify the actions implemented by licensees in response to orders and bulletins issued after September 11, 2001. (NEI1 – 9.1a)

**NRC response:** The comment does not require a response.

**Comment:** One commenter stated that it is not clear from the draft preliminary rule language if the “hostile action events” include the hostile persons engaging in offsite activities that impair radiological monitoring. The commenter suggested that the rule should be clear on whether radiological assessments need to consider and discern offsite dirty bomb-type releases of radiation from releases occurring as a result of hostile actions to the plant itself. (UCS1 – 5)

**NRC response:** The NRC disagrees with the commenter. The NRC proposes to codify hostile action emergency action levels (EALs) to ensure that all licensees and future applicants implement the anticipatory EALs required by the Interim Compensatory Measures orders and suggested as enhancements in Bulletin 2005-02. EALs are used as criteria for determining the need for notification and participation of State and local agencies by appropriate event classification. Declaring hostile action events in a more anticipatory manner would provide more lead time for both onsite and offsite response and result in more effective protection of public health and safety. Radiological assessment is a separate issue. Licensees have specific EALs for assessment of radiological releases of fission products from the reactor plant. Licensees are not required to provide assessment of radiological conditions resulting from a “dirty bomb.” Offsite response organizations (OROs) have people that are trained to monitor radiation hazards such as dirty bomb residue and should not depend on the licensee to provide resources for such an event. However, in the highly unlikely event of a dirty bomb explosion at a nuclear reactor plant site, OROs could request radiological assessment support from the licensee.

### **Amended Emergency Plan Change Process**

**Comment:** One commenter suggested that proposed emergency plan changes should not be compared to the original NRC-approved emergency plan, but rather to only the current plan when determining which changes require prior NRC approval. (NEI1 – 10.1a)

**NRC response:** The NRC disagrees with the commenter. The NRC believes that change analyses would need to consider the original NRC-approved plan, as well as all subsequent changes to the plan. The current plan may have been modified by a series of incremental changes, only some of which may have been reviewed by the NRC. Although all these changes may have individually not resulted in a reduction in effectiveness, the combined effect of these changes can only be adequately evaluated by comparison against the original NRC approved plan (i.e., the original licensing basis).

**Comment:** One commenter suggested that the example changes in the draft § 50.54(q) rule be removed. (NEI1 – 10.1b and NEI1 - 10.1d).

**NRC response:** Since the issuance of the working draft rule language, the NRC reconsidered its decision to provide examples in the rulemaking, deciding instead to provide a greater number of examples in a draft regulatory guide. Relocating the examples to a draft guide allows for more detailed explanation than would be appropriate in the proposed rule. As such, the NRC agrees with the commenter and has removed the examples from the proposed rule.

**Comment:** One commenter asserted that NRC staff apparently interprets any reduction of commitment as a potentially significant reduction in the effectiveness of the emergency plan. The commenter argued that licensees should be allowed to implement alternate methods for meeting the regulations, without prior NRC approval, provided that the alternate method allows only minimal reduction in existing regulatory margin. The commenter stated that the concept of allowing the licensee to minimally reduce regulatory margin while still meeting regulations is similar to the approach allowed by the § 50.59 rule, and that a similar approach should be taken in the proposed rule. (NEI1 – 10.1c)

**NRC response:** The NRC agrees in part and disagrees in part with the commenter. The commenter's assertion regarding a reduction in commitment is not supported by the draft (and proposed) rule language, which clearly does not set a reduction in commitment as a threshold for requiring prior NRC approval.

As reflected in the proposed rule, the NRC agrees that alternative approaches to the regulations should be evaluated under § 50.54(q) and only those changes which constitute reductions in effectiveness would require prior NRC approval. The treatment of alternative approaches in the draft rule language was removed from the proposed rule.

In developing the proposed rule, the NRC considered other change processes including § 50.59. Although the NRC incorporated some elements of the § 50.59 process, other elements were deemed incompatible with the emergency planning regulatory framework. Where many evaluations performed under § 50.59 benefit from quantifiable criteria and numeric analyses, the emergency planning standards are largely subjective in nature and not amenable to objective concepts such as reduction in margin.

### **Evacuation Time Estimate (ETE) Updating**

**Comment:** One commenter questioned the technical basis for the 10% threshold for evaluating changes to ETEs, and how licensees would determine when the threshold is met. Commenters also remarked that the requirement was unclear regarding the types of changes to review and whether the 10% criterion applied to population increase or to a 10% increase in the ETE itself. (NEI1 – 7.1a, UCS1 - 3.2a)

**NRC response:** The NRC agrees with the commenters that clarification of the draft rule language is necessary. This portion of the rule language has been revised, and the proposed rule would require licensees to update their ETEs when the population of either the EPZ or most populous Emergency Response Planning Area increases or decreases by more than 10% from the population that formed the basis for the licensee's currently approved ETE. The population change may be determined using U.S. Census Bureau statistics or State/local statistics for estimating population changes. The basis for establishing a requirement to update ETEs when the population has increased or decreased by at least 10% is derived from the U.S. Department of Transportation "Highway Capacity Manual" (HCM), which contains analysis techniques for determining the capacity of a roadway, i.e., Level of Service (LOS). The analysis shows that traffic volume is a direct indicator of the population involved in an evacuation given the roadway system in the area of concern. When applying HCM Exhibit 23-3, "Speed Flow Curves and LOS for Basic Freeway Segments," to roadways that are near capacity, such as in an evacuation, the LOS indicates a decrease of one level (i.e., from Level D to Level E) with a 10% increase in

passenger car vehicles. This decrease in roadway service results in slower moving traffic and longer ETEs. The decrease in LOS is not apparent for a vehicle, or population, increase of less than 10%.

**Comment:** One commenter asserted that NRC does not have the staff expertise to review ETE analyses, which was evident when contractors reviewed ETEs submitted with combined license applications. The commenter suggested that building quality objectives into the requirements for development of ETEs would be a more cost-effective approach. The commenter noted that this proposed regulatory criterion is not an enhancement to EP regulations and guidance following the terrorist events of September 11, 2001 and is not appropriate for rulemaking. (NEI1 – 7.1b)

**NRC response:** The lack of current staff expertise to review ETEs is not a relevant issue for comment, however, for clarity, it may be noted that Sandia National Laboratories is developing guidance for the conduct of ETE updates. This guidance will also contain a review checklist to enable NRC staff to conduct the reviews and determine the overall ETE adequacy.

The proposed change in regulations regarding ETEs does not flow directly from the threat of hostile action, but rather from the protective action recommendation (PAR) Study (NUREG/CR-6953). The appropriate protective action strategy is dependent on evacuation time for some scenarios, and accurate ETE data is necessary to develop site-specific PAR strategies.

**Comment:** One commenter argued that it would be difficult to determine a 10% cumulative impact of changes on ETEs without actually revising the ETE study itself. The commenter stated that it plans to develop industry guidance that would define the quality objectives that each ETE must meet. (NEI1 – 7.1c)

**NRC response:** The NRC agrees in part with the commenter. The NRC has determined that population changes adequately envelope infrastructure changes and has revised the proposed regulation to require the ETE review and update to depend on a 10% change in the population from the population that formed the basis for the licensee's currently approved ETE. The NRC expects to publish for review and comment, in conjunction with the proposed rule, proposed guidance regarding the review and updates of ETEs. Comments on the proposed guidance will be considered by the NRC in the development of the final guidance document.

**Comment:** Regarding the draft preliminary rule language to require licensees to evaluate demographic changes based on the U.S. Census, one commenter asked if the NRC will accept demographic changes based on U.S. Census updates every 10 years, or if more frequent monitoring will be necessary. (UCS1 - 3.2b)

**NRC response:** The NRC is proposing to amend the regulations by adding language to 10 CFR Part 50, Appendix E, Paragraph IV, to require nuclear power reactor licensees and applicants to revise their ETEs when the decennial census data is available. However, the rule would also require that ETEs be revised when a 10% or greater change in population occurs in the period between censuses.

**Comment:** One commenter asked if ETEs should be based on worst-case evacuation circumstances (e.g., in the midst of a severe snow storm for northern reactors) or situations in which traffic conditions could increase the normal ETE (e.g., a multiple-vehicle traffic accident on a major transportation artery). (UCS1 - 3.2c and 3.2d)

**NRC response:** The NRC disagrees that worst case evacuation circumstances should be used for decision making purposes. In addition to other purposes, the ETE is used for predetermining the most effective strategy for public protective actions in response to various unlikely accident scenarios. The licensee staff is required to be able to make such decisions rapidly, although the more likely case is that there will be time for staff augmentation, discussion, and deliberate decision-making. Average evacuation times are used to support this purpose. If abnormally long evacuation times (such as the circumstances proposed by the commenter) were used, the public might be sheltered in a situation when evacuation is possible and more protective. Even when unusual circumstances may impact evacuation times, local authorities are better informed than nuclear power plant staff regarding roadway disruptions and may direct sheltering as a protective measure in such cases even though the licensee may recommend evacuation. The NRC believes that this arrangement is more protective of public health and safety than the use of worst case timing as a planning basis.

**Comment:** One commenter stated that guidance documents on ETEs issued more than three years after 9/11 are completely silent on security-initiated events and offsite actions that those responsible for security-initiated events might also initiate. The commenter also stated that the NRC cannot revise its EP rules to address security-initiated events if it relies in whole or in part on regulatory guidance documents, such as NUREG/CR-6863, that assume no security-initiated events occur. (UCS1 – 3.1)

**NRC response:** The NRC disagrees with the commenter. The NRC has contracted with Sandia National Laboratories to develop an updated ETE guidance document that will significantly enhance the guidance for licensee development and NRC review of ETEs. The ETE for an onsite event resulting from hostile action is no different than the ETE for an onsite event resulting from another cause. Offsite hostile action events could affect ETEs, if evacuation is necessary, but local authorities are better informed than nuclear power plant staff regarding roadway or other offsite disruptions.

### **On-Shift Multiple Responsibilities**

**Comment:** One commenter suggested that the NRC define the term “collateral duties,” as used in the draft proposed rule provision requiring licensees to determine that personnel assigned to emergency plan implementation functions have not been assigned collateral duties. The commenter asked what off-normal event(s) should the industry plan for and if the analysis should be limited to the risk-significant planning standards. (NE11 – 2.1a)

**NRC response:** The NRC thought that the suggestion to define the term “collateral duties” had merit, but decided to replace the term with “multiple responsibilities” for clarity and to eliminate the need to define a new term. A licensee would be required to plan for the spectrum of accidents defined in its licensing basis, i.e., design basis accidents (DBAs), as well as the design basis threat (DBT). The analysis should identify all tasks which must be completed for

each DBA and the DBT, and the responders responsible for the performance of those tasks. The analysis should not be limited to risk-significant planning standards.

**Comment:** One commenter argued that collateral duties are acceptable as long as all required emergency response duties can be effectively performed in a timely manner during an accident sequence. The commenter noted that industry has developed a white paper supporting a suggested collateral duty assessment approach. (NEI1 – 2.1b)

**NRC response:** The NRC agrees with the commenter because additional duties assigned to on-shift staff who perform emergency response tasks would be acceptable provided that those staff would not be required to perform any additional duties simultaneously with the emergency response tasks. The NRC agrees to consider stakeholder-developed guidance.

### **Licensee Coordination with Offsite Response Organizations (ORO) During Hostile Action Events**

**Comment:** One commenter stated that offsite emergency response agencies have mutual aid agreements in place to support natural or technological events for which the response need exceeds local resources. The commenter also stated that offsite agencies demonstrate the National Incident Management System (NIMS) during hostile-action-based exercises and NIMS would be utilized to activate additional resources when the response need exceeds local resources. The commenter observed that this rulemaking issue was identified as an enhancement to offsite preparedness during the comprehensive review process and since the final disposition of issues identified through the comprehensive review is still ongoing, the commenter suggested that it is premature to include these comprehensive review issues as a part of rulemaking. (NEI1 – 5.1b)

**NRC response:** The NRC disagrees with the commenter. The NRC believes that licensees should be required to appropriately plan for offsite support resources during hostile action scenarios. Mutual aid agreements do not necessarily provide adequate resources in a timely enough manner to enable offsite emergency plans to be implemented as written. These resources may be provided by organizations that are far removed from the plant site and unable to provide them in a manner to meet emergency plan timeliness considerations. This proposed requirement would substantially increase the protection of public health and safety and should not be delayed until the comprehensive review process is complete. However, if the issue has been addressed by licensees through the comprehensive review process, there would be minimal burden on the licensee to meet the proposed requirement.

**Comment:** One commenter noted the draft rule language required evaluation of offsite collateral duties and asked the NRC to describe the role of the Federal Emergency Management Agency (FEMA) in making this determination. (NEI1 – 5.1a)

**NRC response:** The NRC would expect that FEMA would review any necessary offsite plan changes and then evaluate offsite responses during hostile action exercises to ensure OROs have the necessary resources to implement their plans.

**Comment:** One commenter agreed with the proposed requirements in Appendix E.IV.A to ensure that offsite and onsite persons responding to a security-initiated event are dedicated to

that response task. The commenter suggested that these requirements must be expanded to explicitly address a third group of persons – off-duty security force personnel who are likely to be called in to work or report to duty for previously scheduled shift coverage. The commenter stated that such personnel may also be employed by local law enforcement or the National Guard and may be called to duty in such capacities, making them unavailable for work as security force personnel. (UCS1 - 4)

**NRC response:** The NRC disagrees with the commenter. The NRC requires that licensees maintain an adequate emergency response capability including augmentation of the on-shift emergency response organization (ERO). ERO members who could be called in to respond to a plant emergency must be “on call” and available 24 hours a day with no competing responsibilities. A licensee that does not maintain an adequate response capability is not in compliance with current regulations. The NRC is not aware of any such situation, but would take action upon discovering such a situation. The NRC does not believe there is a need for rulemaking on this issue.

### **Emergency Classification Timeliness**

**Comment:** One commenter argued that the proposed changes to Appendix E.IV.C related to emergency classification timeliness do not meet the intent of SECY-06-0200. The commenter questioned the NRC staff’s justification for these particular changes. The commenter suggested that this proposed regulatory criterion should be deleted from the rulemaking. (NEI1 – 6.1a)

**NRC response:** The NRC disagrees with the commenter. In Item No. 5 on Page 6 of SECY-06-0200, the NRC staff proposed to revise the EP regulations to add requirements that would clarify the time for making event classifications. The NRC notes that the regulatory enhancements identified in SECY-06-0200 were not limited to those associated with the terrorist events of September 11, 2001. The Federal Register notice for the proposed rule provides the NRC’s justification for its proposal to amend Appendix E.IV.C to address emergency classification timeliness.

**Comment:** One commenter stated that there is no compelling basis for imposing the rule’s requirements on timeliness of classification. The NRC identified only one late and one missed event classification. The commenter also stated that a timeliness goal is addressed in NEI 99-02, “Regulatory Assessment Performance Indicator Guideline,” and that the NRC should continue to rely on the jointly developed performance indicators (PI), and related criteria in NEI 99-02. The commenter asserted that the industry average PI value of greater than 95% indicates that licensee personnel have a sufficient sense of urgency regarding emergency classification. The commenter also stated that the capability to classify an event is clearly addressed in the reactor oversight process (ROP) EP significance determination process. (NEI1 – 6.1b and NEI1 - 6.1c)

**NRC response:** The NRC disagrees with the commenter. The EP significance determination process in the NRC Inspection Manual, Manual Chapter 0609, Appendix B, does address a classification timeliness goal for the purposes of determining the significance of an apparent violation regarding timeliness. However, there is no timeliness criterion in regulation that could be cited as a violation for which to determine significance.



Although classification timeliness is a criterion for one of the three components that are averaged together to form the PI referenced by the commenter, and that the average performance appears high, the NRC remains concerned that situations continue to develop during actual events that do not reflect this level of performance on the part of all licensees.

The two cited examples are but a sample of inadequate performance identified by the NRC over several years. Although the NRC has issued generic communications and regulatory guidance on classification timeliness, untimely classifications continue to occur. Untimely classifications can delay necessary onsite and offsite response activities and potentially affect the health and safety of the public.

Although the NRC acknowledges the high performance of the majority of licensees, there remains the need to address the performance of the remainder. Placing a timeliness criterion in regulation would provide minimum requirements for all licensees and a basis for appropriate inspection and enforcement activities. Essentially, what the industry commenter is arguing is that a failure to achieve a high degree of timeliness during an actual event is not of sufficient safety/regulatory interest to justify the need for a regulatory “footprint,” (i.e., a clear regulatory requirement). The NRC disagrees with the industry on that point. Timeliness of emergency classification in a real situation could result in enhanced protection to the public, and more effective emergency response from offsite response organizations. Accordingly, the NRC declines to adopt the commenter's proposal.

### **Backup Means for Alert and Notification Systems**

**Comment:** Regarding the proposed changes that the backup notification system need not meet the 15-minute goal for the primary notification system, one commenter asked if the ETEs have an assumption that public notification, with a backup alert and notification system (ANS), begins around 15 minutes or at some later time. The commenter also questioned what constitutes “time zero” for the ETEs. (UCS1 – 6)

**NRC response:** Notification of the public is the length of time between when the evacuation was ordered and when evacuees received this information. Normally ETEs are calculated using the time for notification based on the primary ANS. Offsite authorities would need to be cognizant of the difference in notification time when using the backup means compared to the primary ANS and the impact this time difference would have on the overall ETEs.

The NRC expects to publish for review and comment, in conjunction with the proposed rule, proposed guidance describing what constitutes “time zero” for ETEs. Comments on the proposed guidance will be considered by the NRC in the development of the final guidance document.

**Comment:** One commenter suggested that the proposed requirement to require a backup ANS means may be premature. The commenter stated that national guidance in keeping with the presidential directive has yet to be finalized, the House Committee on Appropriations directed FEMA to update its guidance on outdoor warning and mass notification systems, and FEMA-REP-10 has not been revised to address new criteria. (NEI1 – 3.1a)

**NRC response:** The NRC disagrees with the commenter. The NRC does not believe the proposed rule is premature. Adding a requirement for a backup means for alert and notification systems supports the goal of the 2006 Presidential Directive regarding such systems. Executive Order 13407, “Public Alert and Warning System,” dated June 26, 2006, stated that “[I]t is the policy of the United States to have an effective, reliable, integrated, flexible, and comprehensive system to alert and warn the American people...” and directed the Secretary of Homeland Security to “establish or adopt, as appropriate, common alerting and warning protocols, standards, terminology, and operating procedures for the public alert and warning system to ensure interoperability and the secured delivery of coordinated messages....” The proposed rule would enhance overall ANS reliability and capabilities. In addition to the proposed rule language, the NRC is working closely with FEMA in coordinating changes to onsite and offsite guidance to ensure that the guidance does not conflict with the national strategy for alert and warning systems.

Furthermore, in HR 107-740 (incorporated by reference into Public Law 108-7 regarding fiscal year 2003 appropriations), the House Committee on Appropriations directed FEMA to update its guidance on outdoor warning and mass notification systems that are used for weather-related and other types of emergencies, including nuclear power plant events, with a request that the new guidance require all warning systems to be operable in the absence of an alternating current (AC) power supply. Although requiring warning system operability if there is a loss of AC power would address one of the more common failure modes for these systems, guidance addressing only backup warning system power would not deal with ANS failures resulting from problems other than loss of power or any part of the notification process.

**Comment:** One commenter argued that the NRC staff’s position fails to consider the features of many current ANS installations and suggested that any new rule must allow for consideration of site-specific ANS design features and existing capabilities before imposing additional requirements. The commenter observed that this rulemaking issue was identified as an enhancement to offsite preparedness during the comprehensive review process and since the final disposition of issues identified through the comprehensive review is still ongoing, the commenter suggested it is premature to include this comprehensive review issue as a part of rulemaking. (NEI1 – 3.1b)

**NRC response:** The NRC disagrees with the commenter. The NRC is proposing a requirement for a backup means that would apply generically to different types of alerting and notification systems, and address both the alerting and notification capabilities. Under the proposed requirement, licensees (or applicants) and offsite agencies would be allowed the flexibility to choose the backup means most suited for each particular location, taking into account site-specific ANS design features and existing capabilities. The NRC is working closely with FEMA in coordinating changes to onsite and offsite guidance to ensure that the guidance allows this flexibility and use of state-of-the-art technology. Draft versions of guidance changes will also be made available for public review and comment prior to adoption of the final rule.

The NRC does not foresee the need to await final disposition of issues identified as part of the comprehensive review program. Provisions for an ANS backup means would support the overall intent of this Department of Homeland Security program to resolve gaps in protective and response capabilities for the nuclear sector.

### **Emergency Response Organization Augmentation and Alternate Facilities**

**Comment:** One commenter questioned if the proposal to require licensees to have the capability for event classification and offsite notifications at the alternative facility goes beyond what was required in NRC Bulletin 2005-02. (NEI1 – 4.1a)

**NRC response:** The NRC agrees in part with the commenter. In Bulletin 2005-02, several key capabilities of the alternate facility were identified to support its function as a staging and response preparation area, such as the capability for engineering and damage control teams to begin planning mitigative actions. The EP draft preliminary rule language did go beyond the enhancements specified in Bulletin 2005-02 in that it required the capability for event classification at the alternative facility. However, the capability for event classification would not be needed for the alternate facility to perform its function. In response to stakeholder comments, the event classification requirement is not included in the proposed rule published for public comment. The draft rule language also required the alternative facility to have the capability for offsite notifications, which was in accordance with the Bulletin, and the proposed rule includes that requirement.

**Comment:** One commenter argued that adding the capability to make classifications and notifications at the alternate facility would require equipment to be installed and maintained and would duplicate the capabilities of the licensee's EOF. The commenter stated that there have been no lessons learned during the Phase III hostile action drills that suggest any need for additional requirements. The plant staff is capable of performing the classification and notification of the ORO functions until the near-site and onsite facilities are staffed. The commenter suggested that the requirement for classification and notification in the alternate facility should be removed from the proposed rule. (NEI1 – 4.1b)

**NRC response:** The NRC disagrees with the commenter. The capability to notify offsite organizations was an enhancement specified in Bulletin 2005-02. This capability would be necessary if the EOF is in close proximity to the plant and would be inaccessible during a hostile action event. In that case there would be no backup facility to perform this function if the Control Room somehow lost the capability. Therefore, the alternative facility would be needed to perform these notifications. If the EOF is a safe distance from the plant and is also the designated alternative facility, it would need to have ORO notification capability in the event that the Technical Support Center is inaccessible and the Control Room loses the capability to perform the notification function.

As stated previously, the alternative facility would not be required to have the capability for event classification.

### **Challenging Drills and Exercises – Hostile Action Events**

**Comment:** Two commenters suggested modifying the rule language of Appendix E.IV.F.2 to allow licensees the option that not all exercises result in General Emergency level. (SPA1 – 5, NEI1 – 1.2)

**NRC response:** The NRC agrees with the commenters. Eliminating the proposed requirement for all exercises to result in a General Emergency would be consistent with the goals of varying

exercise challenges, reducing predictability, and increasing realism in exercise scenarios. Therefore, the requirement has been removed in the proposed rule published for public comment.

**Comment:** One commenter stated that promulgating hostile action-based exercise requirements at this time is premature in light of continuing industry Phase III drills, and FEMA and NRC working group alignment commitments. (NEI1 – 1.1)

**NRC response:** The NRC disagrees with the commenter. The industry has been conducting a pilot program for non-evaluated hostile action exercises for two years and the rule would not be promulgated until the planned conclusion of the industry's pilot program. Lessons learned from the pilot drill program have influenced the development of the proposed rule and will play a role in the development of the final rule.

**Comment:** One commenter stated that requiring a radioactive release during every exercise, as the draft preliminary rule would require, contributes to preconditioning. The commenter recommended that requirements for radioactive release should be consistent between the NRC rule and FEMA's exercise evaluation manual. The commenter suggested allowing the option in one exercise of an exercise cycle to not include a radioactive release if the proper mitigating measures are performed. (NEI1 – 1.3)

**NRC response:** The NRC agrees with the commenter and the proposed rule language published for public comment reflects this comment.

**Comment:** One commenter stated that requiring dose levels to exceed EPA-400 Protective Action Guides (PAGs) beyond five miles is not supported by recent studies such as the state-of-the-art reactor consequence analysis. The commenter recommended varying radioactive release magnitude from one exercise to another, but require the radioactive release to be consistent with plant-specific source terms and probabilistic risk-informed (i.e., most likely) accident progression. The commenter stated that a requirement to exceed PAGs at 5 miles creates credibility issues with the scenario and creates dose rates onsite and in-plant that severely limit or prohibit movement of ERO personnel/teams. (NEI1 – 1.4a)

**NRC response:** The NRC does not completely understand the comment. The proposed rule would not require such dose levels, and the State-of-the-Art Reactor Consequence Analysis has not yet been published. The proposed rule is intended to reduce the negative training elements of exercises, but the NRC recognizes that it may not be able to eliminate negative training.

**Comment:** One commenter stated that if the purpose of the extent of play is to require evacuation out to 10 miles, then it should be acceptable to drive this with a controller inject. A message to State decision-makers, after receipt of the utility PAR, to implement a different PAR for exercise demonstration purposes could be used. (NEI1 – 1.4c)

**NRC response:** The NRC understands the commenter to mean that if the exercise evaluators require that an evacuation out to 10 miles be demonstrated, it should be acceptable for exercise controllers to provide a message to the appropriate decision-makers that will drive the demonstration rather than develop an unrealistic scenario to drive the response. The NRC agrees with the commenter. The use of such controller injects can be used to drive the required

exercise demonstration without the need for unrealistic scenario elements. The use of such messages to drive demonstration of offsite protective actions, such as evacuation out to 10 miles, would be allowed in exercises under the proposed rule.

**Comment:** One commenter stated that requiring a radioactive release for every other hostile action-based exercise contributes to preconditioning. The commenter recommended not requiring a radioactive release for every other hostile action-based exercise. (NEI1 – 1.5)

**NRC response:** The NRC agrees with the commenter that requiring a radioactive release for every other hostile action exercise would contribute to preconditioning. The proposed rule does not contain such a requirement. The NRC expects to publish for review and comment, in conjunction with the proposed rule, proposed guidance regarding hostile action exercises. Comments on the proposed guidance will be considered by the NRC in the development of the final guidance document.

**Comment:** One commenter asked if the definition of a “biennial exercise planning cycle” is six years and suggested that an eight-year cycle should be evaluated. (NEI1 – 1.6a)

**NRC response:** The proposed rule does not specify an exercise planning cycle. This issue is being considered in the development of guidance and comments will be accepted during the review period of the guidance document.

**Comment:** One commenter questioned the purpose of the proposed requirement that NRC would review exercise scenarios. The commenter stated that scenarios are developed based on consensus between the licensee and its OROs, and are agreed upon by FEMA. The commenter expressed concern that the NRC and FEMA may not be in agreement on scenario extent of play or related technical expectations, delaying the development of supporting exercise documentation. (NEI1 – 1.6b)

**NRC response:** The NRC disagrees with the commenter. The NRC and FEMA are working in concert to develop consistent guidance. Although a conflict could occur, it is expected that issues will be worked out in a manner to support the exercise schedule.

The NRC proposes to require licensees to submit, for NRC review and approval, exercise scenarios to enable the NRC to ensure licensee exercise scenarios implement the proposed requirements of Appendix E, Section IV.F.2.i and j, including hostile action events and a variety of challenges to reduce preconditioning of respondents.

**Comment:** One commenter suggested modifying the rule language of Onsite Protective Actions During Hostile Action Events to include requirements to describe specific actions to protect onsite personnel and those offsite personnel that respond onsite during hostile action events. (SPA1 – 6)

**NRC response:** The NRC disagrees with the commenter. The proposed rule language states in part: “a range of protective actions to protect onsite personnel during hostile action events...” This proposed requirement would include all personnel who are located at the plant site. Any offsite responders who respond onsite would do so at the direction of the Incident Commander in coordination with licensee management onsite. In addition, the proposed rule

would not direct any specific actions but would allow licensees flexibility to determine, on a site-specific basis, the protective measures most effective for onsite personnel protection. It also would allow licensees to take advantage of new technologies or other innovations that could further enhance the protection of workers.

### **Protection for Onsite Personnel**

**Comment:** One commenter questioned if the proposed requirements for protection of onsite personnel go beyond what was required in Bulletin 2005-02. The commenter asked if it is the expectation that physical protection be provided to protect site personnel and if the EP draft preliminary rule addressed emergency workers or non-emergency workers. (NEI1 – 8.1a)

**NRC response:** The NRC agrees with the commenter that the draft preliminary rule language may have been misleading and has clarified the rule language for the proposed rule. The proposed changes codify the enhancements of Bulletin 2005-02 and do not exceed them. The NRC's expectation would be that emergency directors would employ new strategies to direct personnel away from potentially dangerous locations, not provide physical protection. The proposed requirement would apply to all onsite personnel.

**Comment:** One commenter agreed with codifying Bulletin 2005-02 requirements only as long as the supplementary information published with the proposed and/or final rule cites or repeats the examples of acceptable onsite protective measures contained in Bulletin 2005-02. The commenter suggested addressing onsite protective actions during hostile action events in § 50.47(b)(10) as opposed to Appendix E, Section I. (NEI1 – 8.1b)

**NRC response:** The NRC disagrees with the commenter. The NRC does not propose to update § 50.47(b)(10) to address onsite protective actions. The NRC believes Appendix E is more appropriate because regulatory detail is customarily found in Appendix E, rather than in the planning standards of § 50.47(b). The proposed guidance would provide amplifying information for the examples of acceptable onsite protective measures contained in Bulletin 2005-02. It would also direct licensees to consider developing an onsite protective measure decision-making tool to help the shift supervisor, which was also mentioned in the Bulletin. This tool would be intended to aid the rapid decision for site evacuation via a normal exit, site evacuation by opening gates, or if little time is available, locations for sheltering and buildings to be evacuated. The guidance would also reference the NEI White Paper, endorsed by RIS 2006-12, which provides two examples of this decision-making tool.

### **Guidance Documents**

**Comment:** One commenter stated that it is unacceptable for the guidance documents to be issued (September 2010) so long after the final rule is published (March 2010). The commenter also stated that issuing the guidance after the rule is published deprives external stakeholders of their ability of providing meaningful, informed comments on the rule. (UCS1 – 1)

**NRC response:** The NRC agrees with the commenter. The NRC has adjusted milestones to ensure that guidance is developed in concert with the changes to the regulations. The NRC expects to publish for review and comment, in conjunction with the proposed rule, the proposed

guidance. Comments on the proposed guidance will be considered by the NRC in the development of the final guidance document.

**Comment:** One commenter stated that it plans to develop industry guidance that implements the proposed § 50.54(q) rule and will seek NRC endorsement of the guidance. (NEI1 – 10.1e)

**NRC response:** The NRC expects to make available, for review and comment, a draft regulatory guide that describes an approach acceptable to the NRC for complying with the proposed § 50.54(q) rule. The NRC agrees to consider stakeholder-developed guidance.

**Comment:** One commenter proposed developing a technical document that would guide licensees on using a performance-based approach and asking for NRC endorsement of the guidance. (NEI1 – 11.1b)

**NRC response:** In addition to specifying performance-based criteria for consolidated EOFs in the proposed changes to Appendix E, the NRC expects to publish, in conjunction with the proposed rule, proposed guidance for review and comment. Comments on the proposed guidance, as well as industry-developed guidance, will be considered by the NRC in the development of the final guidance document.

#### **On-Shift Licensee Responsibilities for Emergency Response**

**Comment:** One commenter stated that the requirement for adequate staffing to provide initial facility accident response is not clearly defined. The commenter also stated that if the NRC revises its regulations to address security-initiated events, the NRC must enforce those regulations fully by ensuring licensees actually have adequate staffing at all times. (NGO1 – 4)

**NRC response:** The commenter raises an issue that concerns a security-related issue, not an EP issue, and is beyond the scope of this proposed rule.

#### **Coordination of Rulemaking Efforts**

**Comment:** One commenter suggested that since NRC is currently working on multiple rulemaking efforts that affect EP regulations, these rulemaking efforts should be consolidated where appropriate in 10 CFR 50.54(hh) where EP requirements exist, and provide a reference back to the appropriate section of Appendix E. (NEI1 – 12)

**NRC response:** Section 50.54(hh) was not issued in a final rule in time for consideration in this proposed rule. During the development of the EP final rule, the NRC expects to review any new regulations that could affect the provisions of this proposed rule.