

## Staff Assessment of Near-Term Task Force Recommendations

As directed by SRM-SECY-11-0093, U. S. Nuclear Regulatory Commission (NRC) staff reviewed the Near-Term Task Force (NTTF or Task Force) recommendations within the context of the NRC's existing framework and gave consideration to the various regulatory vehicles available to the NRC to implement the recommendations. The staff determined the near-term regulatory actions based on the staff's judgment of the potential and relative safety enhancement of each of the recommendations.

Each of the following assessments includes the recommendation as presented in the NTTF report, the associated regulations and guidance, the staff's assessment of the recommendation, and the staff's recommendations for regulatory actions to be initiated without delay.

### NTTF Recommendation 2.1

The Task Force recommends the NRC require licensees to reevaluate and upgrade as necessary the design-basis seismic and flooding protection of SSCs [structures, systems, and components] for each operating reactor.

- 2.1 Order licensees to reevaluate the seismic and flooding hazards at their sites against current NRC requirements and guidance, and if necessary, update the design basis and SSCs important to safety to protect against the updated hazards.

### Regulations and Guidance

1. General Design Criterion (GDC) 2, "Design Bases for Protection Against Natural Phenomena," of Appendix A, "General Design Criteria for Nuclear Power Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," requires, in part, that SSCs important to safety be designed to withstand the effects of natural phenomena such as floods, tsunamis, and seiches without loss of capability to perform their safety functions. Plants that received construction permits before issuance of GDC 2 in 1971 meet the intent of the GDC.
2. 10 CFR Part 100, "Reactor Site Criteria," Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," was established to provide detailed criteria to evaluate the suitability of proposed sites and the suitability of the plant design basis established in consideration of the seismic and geologic characteristics of the proposed sites.
3. Regulatory Guide (RG) 1.29, "Seismic Design Classification," issued June 1972 and updated August 1973, February 1976, September 1978, and March 2007.
4. RG 1.59, "Design Basis Floods for Nuclear Power Plants," issued August 1973 and updated April 1976 and August 1977.

5. RG 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants," issued October 1973 and updated December 1973.
6. RG 1.102, "Flood Protection for Nuclear Power Plants," issued October 1975 and updated September 1976.
7. RG 1.125, "Physical Models for Design and Operation of Hydraulic Structures and Systems for Nuclear Power Plants," issued March 1977 and updated October 1978 and March 2009.
8. RG 1.208, "A Performance-Based Approach To Define the Site-Specific Earthquake Ground Motion," issued March 2007.

#### Staff Assessment of NTTF Recommendation 2.1

The staff's assessment of this recommendation indicates that plants may differ in the way they ensure safety against natural phenomena. The staff concluded that sufficient regulatory guidance currently exists to permit licensee reevaluations. However, the staff noted that results of inspections of SSCs at Fukushima Daiichi and Daini Nuclear Power Stations may help inform the implementation of this recommendation. To the extent practical, the new information on the events at Fukushima Daiichi and Daini should be incorporated into the reevaluations. The staff also noted that the implementation of this recommendation would require significant resources for both licensees and NRC, as well as specialized expertise to review licensee reevaluations and to document results of staff evaluations.

*Seismic hazards.* The state of knowledge of seismic hazards within the United States has evolved to the point that it would be appropriate for licensees to reevaluate the designs of existing nuclear power reactors to ensure that SSCs important to safety will withstand a seismic event without loss of capability to perform their intended safety function. The staff notes that ongoing activities to resolve Generic Issue 199, "Implications of Updated Probabilistic Seismic Estimates in Central and Eastern United States on Existing Plants," are directly related to this issue and will be considered in the resolution of Recommendation 2.1.

*Flooding hazards.* The assumptions and factors that were considered in flood protection at operating plants vary. In some cases, the design bases did not consider the effects from the local intense precipitation and related site drainage. In other cases, the probable maximum flood is calculated differently at units co-located at the same site, depending on the time of licensing, resulting in different design-basis flood protection. The NTTF and the staff noted that some plants rely on operator actions and temporary flood mitigation measures such as sandbagging, temporary flood walls and barriers, and portable equipment to perform safety functions. For several sites, the staff noted that all appropriate flooding hazards are not documented in the Updated Final Safety Analysis Report. The NTTF and the staff also noted that flooding risks are of concern because of a "cliff-edge" effect, in that the safety

consequences of a flooding event may increase sharply with a small increase in the flooding level. Therefore, all licensees should confirm that SSCs important to safety are adequately protected from floods.

### Staff Recommendations

The staff recommends that the NRC, as a near-term action, undertake regulatory activities to:

1. Continue stakeholder interactions to discuss the technical basis and acceptance criteria for conducting a reevaluation of site specific seismic hazards. This would include implementation considerations of the hazard and risk methodologies described in draft Generic Letter (GL) 2001-XX, "Seismic Risk Evaluations for Operating Reactors," issued for public comment on September 1, 2011, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML111710783).
2. Initiate stakeholder interaction to discuss application of the present-day regulatory guidance and methodologies being used for early site permit and combined license reviews to the reevaluation of flooding hazards at operating reactors.
3. Develop and issue a request for information to licensees pursuant to 10 CFR 50.54(f) to (1) reevaluate site specific seismic hazards using the methodology discussed in item 1 above, and (2) identify actions that have been taken or are planned to address plant-specific vulnerabilities associated with the updated seismic hazards.
4. Develop and issue a request for information to licensees pursuant to 10 CFR 50.54(f) to (1) reevaluate site specific flooding hazards using the methodology discussed in item 2 above, and (2) identify actions that have been taken or are planned to address plant-specific vulnerabilities associated with the updated flooding hazards.
5. Evaluate licensee responses and take appropriate regulatory action to resolve vulnerabilities associated with updated site specific hazards.

### NTTF Recommendation 2.3

The Task Force recommends that the NRC require licensees to reevaluate and upgrade as necessary the design-basis seismic and flooding protection of SSCs for each operating reactor.

- 2.3 Order licensees to perform seismic and flood protection walkdowns to identify and address plant-specific vulnerabilities and verify the adequacy of monitoring and maintenance for protection features such as watertight barriers and seals in the interim period until longer-term actions are completed to update the design basis for external events.

### Regulations and Guidance

1. GDC 2, "Design Bases for Protection Against Natural Phenomena," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires, in part, that SSCs important to safety be designed to withstand the effects of natural phenomena such as floods, tsunami, and seiches without loss of capability to perform their safety functions.
2. 10 CFR Part 100, "Reactor Site Criteria," Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," was established to provide detailed criteria to evaluate the suitability of proposed sites and the suitability of the plant design basis established in consideration of the seismic and geologic characteristics of the proposed sites.
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4. RG 1.59, "Design Basis Floods for Nuclear Power Plants," issued August 1973 and updated April 1976 and August 1977.
5. RG 1.60, "Design Response Spectra for Seismic Design of Nuclear Power Plants," issued October 1973 and updated December 1973.
6. RG 1.102, "Flood Protection for Nuclear Power Plants," issued October 1975 and updated September 1976.
7. RG 1.125, "Physical Models for Design and Operation of Hydraulic Structures and Systems for Nuclear Power Plants," issued March 1977 and updated October 1978 and March 2009.

### Staff Assessment of NTTF Recommendation 2.3

The NRC should undertake regulatory activities to have licensees perform seismic and flood protection walkdowns to ensure that existing protection and mitigation measures are available, functional, and adequately maintained.

*Seismic hazards.* The staff's assessment of this recommendation indicates that some guidance for seismic protection walkdowns exists. Recent plant inspections by staff in accordance with Temporary Instruction 2515/183, "Followup to the Fukushima Daiichi Nuclear Station Fuel Damage Event," and licensees' plant inspections in response to the Fukushima Daiichi accidents will help inform the implementation of this recommendation. In addition, the staff noted that results of ongoing inspections and evaluations of SSCs at Fukushima Daiichi and Daini Nuclear Power Stations may provide some insights for this recommendation. To the extent practical, the new information on the events at Fukushima Daiichi and Daini should be incorporated into the reevaluations. Evaluations of the recent earthquake near the North Anna Power Station on August 23, 2011, may also provide valuable insights.

*Flooding hazards.* With regard to flooding hazards, the Task Force and the staff have noted some plants rely on operator actions and temporary flood mitigation measures such as sandbagging, temporary flood walls and barriers, and portable equipment to perform safety functions. Results of staff's inspections at nuclear power sites in accordance with Temporary Instruction 2515/183 identified potential issues and observations regarding mitigation measures. Recent flooding at the Fort Calhoun site showed the importance of temporary flood mitigation measures.

The staff noted that guidance should be developed for both the seismic and flooding walkdowns with external stakeholder involvement to ensure consistency.

### Staff Recommendations

The staff recommends that the NRC, as a near-term action, undertake regulatory activities to:

Develop and issue a request for information to licensees pursuant to 10 CFR 50.54(f) to (1) develop a methodology and acceptance criteria for seismic and flooding walkdowns to be endorsed by the staff following interaction with external stakeholders, (2) perform seismic and flood protection walkdowns to identify and address plant-specific vulnerabilities (through corrective action program) and verify the adequacy of monitoring and maintenance for protection features, and (3) inform the NRC of the results of the walkdowns and corrective actions taken or planned.

#### NTTF Recommendation 4.1

The Task Force recommends that the NRC strengthen SBO [station blackout] mitigation capability at all operating and new reactors for design-basis and beyond-design-basis external events.

- 4.1 Initiate rulemaking to revise 10 CFR 50.63 to require each operating and new reactor licensee to: (1) establish a minimum coping time of 8 hours for a loss of all ac [alternating current] power, (2) establish the equipment, procedures, and training necessary to implement an “extended loss of all ac” coping time of 72 hours for core and spent fuel pool cooling and for reactor coolant system and primary containment integrity as needed, and (3) preplan and prestage offsite resources to support uninterrupted core and spent fuel pool cooling, and reactor coolant system and containment integrity as needed, including the ability to deliver the equipment to the site in the time period allowed for extended coping, under conditions involving significant degradation of offsite transportation infrastructure associated with significant natural disasters.

#### Regulations and Guidance

1. 10 CFR 50.63, “Loss of All Alternating Current Power” (known as the “Station Blackout Rule”), requires that each nuclear power plant must be able to cool the reactor core and maintain containment integrity for a specified duration of an SBO.
2. RG 1.155, “Station Blackout,” issued August 1988, describes an acceptable means to comply with 10 CFR 50.63.

#### Staff Assessment of NTTF Recommendations

The NRC should undertake regulatory activities intended to strengthen SBO mitigation capability at all operating and new reactors to address prolonged SBO stemming from design-basis and beyond-design-basis external events to provide core and spent fuel pool cooling, reactor coolant system integrity, and containment integrity. This regulatory action would consider the need for SBO power source(s) and mitigating equipment to be diverse and protected from external events. This regulatory action would also examine whether there is a need to expand SBO mitigation requirements to require power reactors to mitigate an SBO event at a plant (each unit for multi-unit site) until either the onsite or offsite power source is restored to bring the power reactor to a cold shutdown and to maintain spent fuel pool cooling. This rulemaking would primarily amend 10 CFR 50.63 and would impact both operating reactor licensees and new reactor applications.

### Staff Recommendation

The staff recommends that the NRC, as a near-term action:

Engage stakeholders in support of rulemaking activities to enhance the capability to maintain safety through a prolonged SBO. These activities will include the development of the regulatory basis, a proposed rule, and implementing guidance.

## NTTF Recommendation 4.2

The Task Force recommends that the NRC strengthen SBO mitigation capability at all operating and new reactors for design-basis and beyond-design-basis external events.

- 4.2 Order licensees to provide reasonable protection for equipment currently provided pursuant to 10 CFR 50.54(hh)(2) from the effects of design-basis external events and to add equipment as needed to address multi-unit events while other requirements are being revised and implemented.

## Regulations and Guidance

1. 10 CFR 50.54(hh)(2) requires licensees to develop and implement guidance and strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities under circumstances associated with the loss of large areas of the plant due to explosions or fire.
2. The required strategies include firefighting, operations to mitigate fuel damage, and actions to minimize radiological release.
3. Nuclear Energy Institute (NEI) 06-12, Revision 2, "B.5.b Phase 2 & 3 Submittal Guidance," issued December 2006, provides guidance supporting 10 CFR 50.54(hh)(2).
4. The equipment procured and used to implement the strategies of 10 CFR 50.54(hh)(2) is controlled through the licensee's commitment management process (which follows NEI 99-04, "Guidelines for Managing NRC Commitment Changes," issued July 1999).

## Staff Assessment of NTTF Recommendation

The staff concludes that equipment procured pursuant to 10 CFR 50.54(hh)(2) will provide, as an interim measure, some of the coping capability that is recommended for addressing the NTTF recommendations associated with prolonged SBO events. However, the staff notes the NTTF finding that the current guidance only addresses single unit capacity and storage of the equipment for security-related initiating events. Specifically, the guidance in the NRC-endorsed NEI 06-12, for equipment used to implement the strategies in 10 CFR 50.54(hh)(2) via the extensive damage mitigation guidelines (EDMGs), is silent on whether the equipment needs to be protected from the effects of external events. The staff agrees that there will be a benefit to reasonably protecting the mitigation equipment while still meeting the intended purpose for security-related events. Any regulatory action to direct licensees to reasonably protect this equipment will need to address what constitutes "reasonably protect." This will be framed to support licensees taking practical actions that increase the likelihood that the equipment will survive the effects of external events while not reducing the availability of the equipment to function for its intended purpose, which is to support implementation of the strategies to mitigate the loss of large areas of the plant due to explosions and fires. Accordingly, "reasonably



protect” would not necessarily mean locating the equipment in seismic Category I structures (unless that action is practical and does not adversely impact the mitigation of large fires and explosions).

The staff also concludes that use of this 10 CFR 50.54(hh)(2) equipment, as envisioned by the NTTF, will likely require the equipment be supplemented to address a multi-unit condition.

In the near-term, the staff concludes early interaction with external stakeholders would be beneficial to explore the 10 CFR 50.54(hh)(2) mitigation strategies that might be useful for prolonged SBOs as an interim measure until regulatory actions associated with Recommendation 4.1 (SBO rulemaking) are completed. In addition, this interaction would include a discussion of how those strategies might be expanded to better address the SBO conditions and how equipment might best be supplemented to support those modified strategies. The results of this interaction would inform the staff actions going forward on whether, and how, to amend 10 CFR 50.54(hh)(2) to address both loss of large areas due to explosions and fires and prolonged SBO.

The staff concludes that it would be appropriate to redefine what level of protection of public health and safety should be regarded as adequate for reasonable protection and capacity of the 10 CFR 50.54(hh)(2) equipment.

#### Staff Recommendations

The staff recommends that the NRC, as a near-term action, undertake regulatory activities to:

Develop and issue Orders to licensees to provide reasonable protection of the equipment used to satisfy the requirements of 10 CFR 50.54(hh)(2) from the effects of external events, and to establish and maintain sufficient capacity to mitigate multi-unit events. This would include stakeholder interactions to define acceptance criteria for reasonable protection of 10 CFR 50.54(hh)(2) equipment from design basis external hazards.

## NTTF Recommendation 5.1

The Task Force recommends requiring reliable hardened vent designs in BWR [boiling-water reactor] facilities with Mark I and Mark II containments.

- 5.1 Order licensees to include a reliable hardened vent in BWR Mark I and Mark II containments.
  - This order should include performance objectives for the design of hardened vents to ensure reliable operation and ease of use (both opening and closing) during a prolonged SBO.

## Regulations and Guidance

1. GL 89-16, "Installation of a Hardened Wetwell Vent," was issued to licensees of nuclear plants with BWR Mark I primary containments requesting that they consider voluntary installation of hardened wetwell vents under the provisions of 10 CFR 50.59, "Changes, Tests and Experiments," to provide assurance of pressure relief through a path with significant scrubbing of fission products should normal and design basis containment cooling systems not be available. Hardened wetwell airspace vents of varying designs, but all alternating current (AC) dependent, were installed in the currently operating units with Mark I containments primarily to avoid exceeding the primary containment pressure limit.
2. 10 CFR 50.54(hh)(2) requires licensees to develop and implement guidance and strategies to maintain or restore containment capabilities under the circumstances associated with loss of a large area of the plant due to explosions or fire; expectation B.2.e of the B.5.b Phase 1 Guidance Document dated February 25, 2002 (designated Safeguards Information) and Section 3.4.8 of the NRC-endorsed Phase 3 guidance in NEI 06-12, Revision 2, both specify that an acceptable means of meeting the 10 CFR 50.54(hh)(2) requirements includes the development of a procedure or strategy to allow venting primary containment to secondary containment, without AC power, as an alternate method to remove heat from the primary containment for BWR licensees. All currently operating BWR licensees, including those with BWR Mark I, Mark II, and Mark III containment designs, adopted this approach to meeting the requirements of 10 CFR 50.54(hh)(2). There are neither current NRC regulations that require this capability for other severe (beyond design basis) accidents nor design criteria for the vent paths used in this strategy.

## Staff Assessment of NTTF Recommendations

BWR Mark I primary containments should have a reliable hardened vent for mitigating beyond design basis events. The staff will further evaluate and address this recommendation with respect to BWR Mark II primary containments in the 45-day notation vote paper.

This portion of the NTTF recommendation is consistent with previous staff studies and evaluation of Mark I primary containment design capabilities to withstand beyond design basis accident scenarios. The Fukushima accident highlighted the importance of the wetwell vent function, the accessibility of the valves and the capability for operation independent of AC power.

The staff concludes that it would be appropriate to redefine what level of protection of public health and safety should be regarded as adequate for venting of BWR Mark I primary containments.

#### Staff Recommendation

The staff recommends that the NRC, as a near-term action, undertake regulatory activities to:

Develop and issue Orders to licensees with BWR Mark I primary containment designs to take action to ensure reliable hardened wetwell vents. This will include interactions with stakeholders to develop the technical bases and acceptance criteria for suitable design expectations for reliable hardened vents.

## NTTF Recommendation 8

The Task Force recommends strengthening and integrating onsite emergency response capabilities such as EOPs [emergency operating procedures], SAMGs [severe accident management guidelines], and EDMGs.

- 8.1 Order licensees to modify the EOP technical guidelines (required by Supplement 1, "Requirements for Emergency Response Capability," to NUREG-0737, issued January 1983 (GL 82-33), to (1) include EOPs, SAMGs, and EDMGs in an integrated manner, (2) specify clear command and control strategies for their implementation, and (3) stipulate appropriate qualification and training for those who make decisions during emergencies.
  - The Task Force strongly advises that the NRC encourage plant owners groups to undertake this activity rather than have each licensee develop its own approach. In addition, the Task Force encourages the use of the established NRC practice of publishing RGs (rather than NUREGs, supplements to NUREGs, or GLs) for endorsing any acceptable approaches submitted by the industry.
- 8.2 Modify Section 5.0, "Administrative Controls," of the Standard Technical Specifications for each operating reactor design to reference the approved EOP technical guidelines for that plant design.
- 8.3 Order licensees to modify each plant's technical specifications to conform to the above changes.
- 8.4 Initiate rulemaking to require more realistic, hands-on training and exercises on SAMGs and EDMGs for all staff expected to implement the strategies and those licensee staff expected to make decisions during emergencies, including emergency coordinators and emergency directors.

## Regulations and Guidance

1. RG 1.33, Revision 2, "Quality Assurance Program Requirements (Operation)," Appendix A, issued February 1978, required EOPs as a subset of the applicable procedures recommended in Section 5.0, "Administrative Controls," of licensee technical specifications.
2. NUREG-0737, "Clarification of TMI [Three Mile Island] Action Plan Requirements," Supplement 1, "Requirements for Emergency Response Capability," issued January 1983 (GL 82-33), required the development and submittal for review and approval of EOP technical guidelines.

3. Licensees developed SAMGs as a voluntary program, and the SAMGs are documented as meeting regulatory commitments. There is neither a requirement for realistic, hands-on training or exercises on SAMGs, nor a requirement for integration of the SAMGs, EOPs, and EDMGs.
4. 10 CFR 50.54(hh)(2) requires that licensees develop guidance and strategies. "EDMG" is the generic term used by industry for the required guidance and strategies. Requirements for exercise of EDMGs are included in the final rulemaking described in SECY-11-0053, "Final Rule: Enhancements to Emergency Preparedness Regulations (10 CFR Part 50 and 10 CFR Part 52)," dated April 8, 2011. There is no specific requirement for training on these guidance and strategies; the endorsed guidance on the subject in NEI 06-12, Revision 2, specifies training for 10 CFR 50.54(hh)(2).

#### Staff Assessment of NTTF Recommendations

EOPs, SAMGs, and EDMGs, should be strengthened and integrated. Transition points, command and control, decisionmaking, and training should be clarified.

SAMGs should be required along with qualification and training for those licensee staff expected to make decisions during beyond design basis accident scenarios using either the SAMGs or EDMGs.

Finally, the staff concludes that early interaction with stakeholders would be useful in determining the optimal mechanism for implementing these recommendations as requirements.

#### Staff Recommendations

The staff recommends that the NRC, as a near-term action, undertake regulatory action to resolve NTTF Recommendations 8.1, 8.2, 8.3 and 8.4:

Issue an advanced notice of proposed rulemaking to engage stakeholders in rulemaking activities associated with the methodology for integration of onsite emergency response processes, procedures, training and exercises. Interact with stakeholders to modify the EOP generic technical guidelines in order to include guidance for SAMGs and EDMGs in an integrated manner and to clarify command and control issues as appropriate.

## NTTF Recommendations 9.3 and 9.4

The Task Force recommends that the NRC require that facility emergency plans address prolonged SBO and multiunit events.

9.3 Order licensees to do the following until rulemaking is complete:

- Determine and implement the required staff to fill all necessary positions for response to a multi-unit event

...

- Provide a means to power communications equipment needed to communicate onsite (e.g., radios for response teams and between facilities) and offsite (e.g., cellular telephones and satellite telephones) during a prolonged SBO.

...

9.4 Order licensees to complete the ERDS [Emergency Response Data System] modernization initiative by June 2012 to ensure multi-unit site monitoring capability.

## Regulations and Guidance

1. 10 CFR 50.47, "Emergency Plans," includes the 16 planning standards of 10 CFR 50.47(b), and Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50 describes information needed to demonstrate compliance with EP requirements.
2. NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, issued November 1980, describes guidance and an acceptable means for demonstrating compliance with the Commission's regulations.
3. SECY-11-0053, "Final Rule: Enhancement to Emergency Preparedness Regulations (10 CFR Part 50 and 10 CFR Part 52)," dated April 8, 2011, codifies hostile-action-based enhancements, among others.
4. 10 CFR 50.27(b)(5) and Section IV.D.3 of Appendix E to 10 CFR Part 50 require that "licensees provide notification and instruction to the public within the plume exposure pathway emergency planning zone (EPZ)."
5. Section IV of Appendix E to 10 CFR Part 50 codifies the requirements for the NRC's ERDS.
6. NUREG-0696, "Functional Criteria for Emergency Response Facilities," issued February 1981, describes the facilities and systems that licensees can use to improve emergency response to accidents, such as the technical support system, operational

support center, and emergency offsite facility.

#### Staff's Assessment of NTF Recommendations 9.3 and 9.4

The staff's assessment of Recommendation 9.3 indicates that regulatory action should be initiated to determine the required staffing to fill all necessary positions for responding to a multi-unit event. This would require both the NRC staff and licensees to reevaluate the current staffing assumptions and analysis for effectively responding to multi-unit incidents, in addition to actions being taken to satisfy the requirements of the recently affirmed Emergency Preparedness Final Rule. The staff is focused on licensees completing the staffing analyses only so that they could be done along with the actions required by the impending rule. Any resulting needs identified by those analyses related to work space or equipment will be considered as part of the 45-day review.

The staff also concludes that there is a need to strengthen the requirements to "provide a means to power communications equipment needed to communicate onsite (e.g., radios for response teams and between facilities) and offsite (e.g., cellular telephones and satellite telephones) during a prolonged SBO." This would require additional guidance regarding "acceptable" communications equipment that does not rely on the availability of facility AC power.

The staff's assessment of Recommendation 9.4 indicates this initiative is currently being implemented and is achievable without delay. The ERDS modernization initiative is already scheduled to be completed by June 2012. The NRC has an implementation schedule for all licensees regarding their site-specific ERDS modernization initiative; however, the staff will use additional regulatory tools if commitments are not met (e.g., a Confirmatory Order).

The staff notes early interaction with stakeholders will be essential to determine the optimal mechanisms for implementing each of the above recommendations.

#### Staff Recommendation

The staff recommends that the NRC, as a near-term action, undertake regulatory activities to:

1. Develop and issue a request for information to licensees pursuant to 10 CFR 50.54(f) to (1) perform a staffing study to determine the required staff to fill all necessary positions to respond to a multi-unit event, (2) evaluate what enhancements would be needed to provide a means to power communications equipment necessary for licensee onsite and offsite communications during a prolonged station blackout event, and (3) inform the NRC of the results of the staffing study and any actions taken or planned, along with their implementation schedules, to react to the staffing study results and to enhance the communications equipment.

2. Evaluate licensee responses and take appropriate regulatory action.

The request for information will include a schedule for interactions with stakeholders to inform the NRC as the technical bases and acceptance criteria are developed for (1) ensuring sufficient licensee staffing for responding to multi-unit events, and (2) ensuring reliable licensee onsite and offsite communications during a prolonged SBO.

The staff also recommends that the NRC more closely monitor the industry's completion of the ERDS modernization initiative. The ERDS modernization initiative is scheduled to be completed by June 2012; however, if licensees fail to meet their implementation schedules, the staff will use additional regulatory tools (e.g., an Order) to ensure that licensees meet all requirements associated with the ERDS capability.