

Emergency Response Organization Augmentation and Alternate Facilities

A. Definition of the Regulatory Problem.

The original U.S. Nuclear Regulatory Commission (NRC) regulations and guidance used for the approval of nuclear plant emergency plans, including actions to protect emergency workers, did not envision the post September 11, 2001 threat environment. These onsite protective actions were intended to maximize site personnel safety during emergency radiological conditions. Although these actions are appropriate for most anticipated nuclear power plant emergencies, they may not provide adequate protection for emergency workers during a hostile action (e.g., armed attack, aircraft attack). These emergency protective actions are key to staging the trained and qualified emergency responders for their onsite and offsite roles at the emergency response facilities to ensure the implementation of measures to protect the public health and safety.

The onsite emergency preparedness facilities (e.g., technical support center, operations support center, near-site emergency operations facility) may not be accessible by emergency response personnel when security-initiated events are in progress. Consequently, the emergency response organization (ERO) may not be able to take actions to mitigate facility damage or implement measures that will protect the public health and safety until security is established. The current regulations do not require provisions for an alternate facility, so as not to endanger the responding emergency workers, to support ERO staff augmentation when security events are in progress.

B. Existing Regulatory Framework.

The regulatory requirements in Title 10, Section 50.47, of the *Code of Federal Regulations* (specifically 10 CFR 50.47(b)(10)) require licensees to develop a range of protective actions for emergency workers. These onsite protective actions may include required actions for assembly, accountability measures, site evacuation, and activation of emergency response facilities. As required by 10 CFR 50.47(b)(8), licensees must provide and maintain emergency facilities and equipment to support the emergency response.

Additionally, the descriptions of the emergency facilities and protective actions in NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," issued November 1980, do not contain a security-based perspective that accounts for intentional, dedicated efforts from terrorist attacks. (Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Rev. 2, issued October 1981, endorsed the guidance in NUREG-0654/FEMA-REP-1.) Response to security event-based emergencies can present unique challenges beyond those planned for an evolving plant safety event. Licensees are required by Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to provide and describe adequate emergency facilities and equipment to support emergency response, but NRC regulations and related guidance provide limited information about these facilities when addressing security-initiated events.

Following the terrorist attacks of September 11, 2001, the NRC issued to all licensees EA-02-26, "Commission Orders Modifying Licenses," dated February 25, 2002, which included

interim compensatory measures (ICMs) for nuclear security and emergency preparedness. These measures included the requirement to review security and emergency plans, ensure the adequacy of emergency response plans, and evaluate whether alternative facilities would be available if onsite emergency response facilities were not accessible.

As a means to address this and other issues, the NRC issued Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," (BL-05-02) on July 18, 2005, to collect information on the type of emergency preparedness enhancements licensees had implemented to address the hostile action contingency.

The industry developed a guidance document which NRC endorsed in Regulatory Issue Summary (RIS) 2006-12, "Endorsement of Nuclear Energy Institute (NEI) Guidance 'Enhancements to Emergency Preparedness Programs for Hostile Action,'" dated July 19, 2006. In Section D of the endorsed NEI guidance document, deployment of onsite ERO staff to an alternative facility is recommended if there is time to safely relocate personnel. However, implementation of an alternate facility was voluntary and the licensees neither have been nor can they be inspected for compliance. Furthermore, a licensee could decide to remove this enhancement.

C. Preliminary Options Considered to Resolve the Problem.

1. Take no action.

This option would maintain the regulatory basis and there would continue to be no explicit regulatory requirement regarding the actions necessary during security-related events to staff an alternate facility with an ERO in an emergency situation. The NRC would continue to rely on the voluntary industry guidance and current regulatory guidance. The need to enhance licensee capabilities in the post-September 11, 2001, threat environment has not diminished. The staff considered this option to be unacceptable because it is contrary to the Commission direction in the staff requirements memorandum (SRM) associated with SECY-06-0200, "Results of the Review of Emergency Preparedness Regulations and Guidance," dated September 20, 2006, and the need to enhance licensee capabilities in the current threat environment.

2. Use voluntary programs.

In response to BL-05-02, licensees affirmed in writing that they would develop and implement onsite protective actions appropriate for hostile action and there was a voluntary industry effort to develop further guidance on this issue. The staff recognizes that although implementation of alternate emergency facilities as described in BL-05-02 would meet the intent of the Commission following the September 11, 2001, terrorist attacks, there would be no regulatory requirement for licensees to maintain those changes described in the industry document and there would be no consistent minimum level of implementation that the NRC had determined was adequate.

For these reasons the staff believes that, while a voluntary effort can improve emergency response, it will not achieve the level of response capability necessary in the post September 11, 2001, threat environment to adequately protect public health and safety.

3. Implement proposed regulation.

The staff believes that the best course of action would be to amend the NRC's emergency preparedness regulations to require licensees to provide for alternate facilities for ERO augmentation during security-based events. This would provide criteria for protection of emergency workers, ensure effective emergency plan implementation to mitigate event consequences, and provide adequate implementation of protective measures.

For licensees who have received NRC approval to establish a consolidated emergency operations facility (EOF) as described in Attachment 6 of this rulemaking plan, this regulation would be problematic. These licensees may need to establish an alternate facility or share a local facility with offsite organizations if the consolidated EOF was remotely located. This alternate facility would provide for a timely ERO return to the affected site after hostile actions ended.

By establishing a regulatory framework that codifies NRC expectations, the NRC and other stakeholders would have reasonable assurance for both security-initiated and plant operational events that the necessary emergency response personnel would be notified and would respond to implement protective measures to adequately protect public safety and health.

Following this rulemaking, the staff expects to make conforming revisions to other existing guidance for compliance with the newly codified security-event-based criterion and could develop new guidance.

4. Implement some other regulatory scheme.

It is possible that some other regulatory scheme would be more effective and efficient than the one proposed. The staff has examined several alternate designs in the development of the proposed scheme. For example, there was a concern that the regulations would be too specific and that more details should be left to guidance. This scheme was rejected because there is no regulatory means to require licensees to follow the guidance unless the regulations also required that licensees submit changes to emergency plans for approval. Therefore, licensees could make changes to emergency plans and the NRC would not have a regulatory basis to object to the change.

A strength of the NRC rulemaking process is that it offers the opportunity for public comment on proposed regulations. If another viable scheme is proposed during that process, the staff will review it and if it could adequately protect public health and safety, propose its implementation to the Commission for consideration.

D. Technical References and Supporting Documents.

- EA-02-26, "Commission Order Modifying Licenses," February 25, 2002.
- SECY-03-0165, "Evaluation of EP Planning Basis Post-9/11," September 22, 2003.
- RIS 2004-15, "EP Issues Post-9/11," October 18, 2004.
- SECY-04-0213, "Status of Actions Identified in SECY-03-0165," November 12, 2004.
- SECY-05-0010, "Recommended Enhancements of EP Post-9/11," January 10, 2005.
- "Developing Mitigating Strategies IAW B.5.b of 2/25/02 Order," February 24, 2005.
- Bulletin 2005-02, "Emergency Preparedness and Response Actions for Security-Based Events," July 18, 2005.
- NEI White Paper, "Enhancements to Emergency Preparedness Programs for Hostile Action," November 18, 2005.
- RIS 2006-02, "Good Practices for Licensees During the Emergency Preparedness Component of Force-on-Force Exercises," February 23, 2006.
- RIS 2006-12, "Endorsement of Nuclear Energy Institute Guidance 'Enhancements to Emergency Preparedness Programs for Hostile Action,'" July 19, 2006.
- NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Sections H and J, November 1980. The NRC endorsed NUREG-0654/FEMA-REP-1 in Regulatory Guide 1.101, Rev. 2, "Emergency Planning and Preparedness for Nuclear Power Plants," October 1981.
- NUREG-0696, Rev. 1, "Functional Criteria for Emergency Response Facilities," February 1981.

E. Potential Responses from Stakeholders.

Licensees may not be supportive of the proposed enhancements to the EP regulations for alternative facilities to be used when onsite emergency facilities may not be safely accessed because it may increase costs which will require the maintenance and upkeep of the current emergency facilities. This will be viewed as a burden, and resources will not be used in a risk-based prioritization. Although the industry has developed a guidance document through the Nuclear Energy Institute, this document lacks critical elements considered necessary by the staff.

Offsite response organizations and advocacy groups have in general been supportive of enhancements to the EP program for security events, although advocacy groups have also expressed support for additional changes to EP regulations and guidance for security events.

The response from the Federal Emergency Management Agency (FEMA) is not certain and the NRC has made efforts to coordinate with FEMA on this issue.