

On-Shift Collateral Duties

A. Definition of the Regulatory Problem.

U.S. Nuclear Regulatory Commission (NRC) regulations do not clearly state that shift personnel assigned to emergency plan implementation as a collateral duty must not have primary responsibilities that would prevent them from performing the emergency plan tasks. This could result in a lack of shift resources necessary for emergency plan implementation so that during an emergency, licensees may not be able to implement adequate protective measures. For example, non-licensed operators could be assigned to secondary emergency response duties (e.g., fire brigade) which interfere with their primary emergency response duties (e.g., responsibilities for plant mitigation activities).

B. Existing Regulatory Framework.

Title 10, Section 50.47(b)(2), of the *Code of Federal Regulations* contains the regulatory requirements for emergency plan shift staffing. This section states that “adequate staffing to provide initial facility accident response in key functional areas is maintained at all times....” NUREG-0654/FEMA-REP-1, Revision 1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” issued November 1980, provides guidance for defining “adequate staffing.” The staff considers this guidance to be a goal rather than a specific requirement and uses it to determine the adequacy of emergency plan shift staffing. However, neither NRC guidance nor regulations address the assignment of multiple duties to staff expected to respond in an emergency. This issue became evident through analyses of security guard duties performed in the aftermath of the September 11, 2001 terrorist attacks. Many licensees assigned emergency plan implementation duties to security force personnel. However, these personnel would not be available to perform those duties during a security event because they would be required to respond to a defensive position. The NRC issued a series of orders in 2002 to correct the assignment of collateral duties to security force personnel, but the potential for primary duties to prevent shift personnel from implementing the emergency plan remains because of a lack of regulatory clarity.

C. Preliminary Options Considered to Resolve the Problem.

1. Take no action.

This option would maintain the status quo and would not require changes to the regulations, contrary to direction from the Commission in the staff requirements memorandum associated with SECY-06-0200, “Results of the Review of Emergency Preparedness Regulations and Guidance,” dated September 20, 2006, which identified the need to clarify NRC regulations and guidance. The staff considered this opinion and determined that the regulation should be revised because its current implementation could result in gaps in response coverage. Therefore, the staff considered this option to be unacceptable.

2. Use voluntary programs.

An alternative to the proposed regulatory change would be to allow industry to develop a voluntary standard for shift staff emergency preparedness (EP) duties. The staff believes that allowing industry to voluntarily develop such a standard is not appropriate. There may be significant resource pressure on licensees to reduce staffing in general and shift staffing in particular. An industry developed standard may reflect those pressures in a manner that would not induce licensees to provide adequate resources. Furthermore, even if the industry initiated a voluntary effort to develop shift staffing guidance and the NRC accepted it, there would be no regulatory requirement for licensees to maintain staffing changes and there would be no consistent minimum level of implementation that the NRC had determined to be adequate. For these reasons the staff believes that, while a voluntary effort is possible, it will not achieve the level of response capability necessary to adequately protect public health and safety.

3. Implement proposed regulation.

Amending the NRC's EP regulations to require licensees to ensure duties assigned to shift staff allow timely emergency plan implementation would establish a regulatory framework that codifies the NRC expectation of effective emergency plan implementation and the adequate implementation of public and worker protective measures should they be necessary. By establishing consistent requirements the agency and other stakeholders would have reasonable assurance of timely emergency plan implementation for both security-initiated and plant operational events. Subsequently, the necessary emergency response personnel would be notified and would respond to implement protective measures to adequately protect public safety and health.

Following the proposed rulemaking, the staff would make conforming revisions to other existing guidance for compliance with the newly codified requirements and develop new guidance. The staff believes that implementation of the proposed regulations would be the best course of action.

4. Implement some other regulatory scheme.

The NRC held public meetings with key stakeholders, including industry, in 2005. Stakeholders did not identify other regulatory schemes. Furthermore, the staff is not aware of other regulatory schemes that would clarify requirements. However, the NRC rulemaking process 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.

- 10 CFR 50.47(b)(2).

- 10 CFR Part 50, “Domestic Licensing of Production and Utilization Facilities,” Appendix E, “Emergency Planning and Preparedness for Production and Utilization Facilities,” Section IV.A.
- NUREG-0654/FEMA-REP-1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” Section II.B, November 1980.
- NUREG-0696, “Functional Criteria for Emergency Response Facilities,” March 2002.
- NUREG-1791, “Guidance for Assessing Exemption Requests from the Nuclear Power Plant Licensed Operator Staffing Requirements Specified in 10 CFR 50.54(m)—Final Report,” July 2005.
- NUREG-0933, “A Prioritization of Generic Safety Issues,” footnote 1655, October 2006.
- Supplement 1 to NUREG-0737, “Clarification of TMI Action Plan Requirements,” January 1983.
- Information Notice (IN) 91-77, “Shift Staffing at Nuclear Power Plants,” November 26, 1991.
- IN 93-44, “Operational Challenges during a Dual-Unit Transient,” June 15, 1993.
- IN 93-81, “Implementation of Engineering Expertise on Shift,” October 12, 1993.
- IN 95-23, “Control Room Staffing below Minimum Regulatory Requirements,” April 24, 1995.
- IN 95-48, “Results of Shift Staffing Study,” October 10, 1995.
- SECY-93-184, “Shift Staffing at Nuclear Power Plants,” June 29, 1993.

Additionally, guidance would be developed and promulgated either in a supplement to NUREG-0654/FEMA-REP-1 or through Regulatory Guide 1.101, “Emergency Planning and Preparedness for Nuclear Power Reactors,” issued October 1981, that would provide a description of the EP and safety functions that a nuclear power plant shift staffing organization must accomplish. The staff would develop this guidance and seek stakeholders’ input.

E. Potential Response from Stakeholders.

Licensees are likely to resist these proposed enhancements to the EP regulations because they may require additional shift staffing. Licensees may argue that the current regulations are adequate. Offsite response organizations and advocacy groups have in general been supportive of enhancements to the EP programs. The response of the Federal Emergency Management Agency is not certain, but because this is largely an onsite issue, the agency staff is not likely to have a strong opinion.