

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, D.C. 20555-0001

February 23, 2006

**NRC REGULATORY ISSUE SUMMARY 2006-02:  
GOOD PRACTICES FOR LICENSEE PERFORMANCE DURING THE  
EMERGENCY PREPAREDNESS COMPONENT OF FORCE-ON-FORCE  
EXERCISES**

**ADDRESSEES**

All holders of operating licenses for nuclear power reactors, except those who have permanently ceased operations and have certified that fuel has been permanently removed from the reactor vessel.

**INTENT**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory information summary (RIS) to inform licensees of good practices identified based on staff observations of licensees' emergency preparedness (EP) performance during force-on-force (FOF) exercises. This RIS requires no action or written response by addressees.

**BACKGROUND**

Following the terrorist attacks of September 11, 2001, the NRC issued orders requiring compensatory measures for nuclear security and safety, including EP programs. As a prudent measure, the NRC also suspended Operational Safeguards Response Evaluation Program assessments to allow licensee security resources to focus on responding to the events of September 11. Subsequently, the Commission approved staff plans to resume these assessments, now referred to as FOF exercises, in a phased approach. EP lessons learned and good practices were provided to licensees for consideration in Attachment 1 to RIS 2004-15, dated October 18, 2004, based on NRC staff observations of the pilot and transition FOF exercises.

In November 2004, the final FOF exercise program was implemented and Inspection Procedure (IP) 71130.03, "Contingency Response – Force-on-Force Testing," was issued. Section 5.20, "Emergency Planning," of IP 71130.03 provided guidance to NRC inspectors on assessing the licensee's ability to conduct the EP component of the FOF exercises, including the integration of security, plant operations, and emergency response actions, and the licensee's process for identifying and correcting EP weaknesses.

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RIS 2006-02

## **SUMMARY OF ISSUES**

The NRC staff has supported the FOF exercise program observing the demonstration of onshift EP and operational response capabilities. In general, the licensees have demonstrated the ability to effectively critique performance and utilize the corrective action process based on their experience in conducting EP drills and exercises under IP 71114.01, "Exercise Evaluation," and IP 71114.06, "Drill Evaluation." However, based on NRC staff's continuing observations, we have compiled additional licensee good practices that are listed in the enclosure. These observations deal with the licensee's actions taken in response to a potential terrorist event and its ability to effectively demonstrate the EP and operations-security interface during an FOF exercise.

## **BACKFIT DISCUSSION**

This RIS requires no action or written response. Any action by addresses to implement changes to their emergency plans or procedures in accordance with the guidance in this RIS is strictly voluntary and, therefore, is not a backfit under 10 CFR 50.109. Consequently, the NRC staff did not perform a backfit analysis.

## **FEDERAL REGISTER NOTIFICATION**

A notice of opportunity for public comment on this RIS was not published in the *Federal Register* because the RIS is informational and pertains to a staff position that does not depart from current regulatory requirements and practices.

## **SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT OF 1996**

The NRC has determined that this action is not subject to the Small Business Regulatory Enforcement Fairness Act of 1996.

## **PAPERWORK REDUCTION ACT STATEMENT**

This RIS does not contain information collections and, therefore, is not subject to the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

## CONTACT

Please direct any questions about this matter to the technical contact listed below.

*/RA/*

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Enclosure: EP Good Practices Developed From NRC Staff Observations of FOF Exercises

Note: NRC generic communications may be found on the NRC public Web site,  
<http://www.nrc.gov>, under Electronic Reading Room/Document Collections.

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## **EP GOOD PRACTICES DEVELOPED FROM NRC STAFF OBSERVATIONS OF FOF EXERCISES**

The following are not regulatory requirements, but various licensee good practices observed by NRC staff during the EP/operations component of recent FOF exercises. They are meant to supplement the items previously identified in RIS 2004-15. These observed good practices may help licensees self-identify ways to enhance their performance in exercises and station response to security-related events or threats.

### **Exercise Conduct and Control**

The following licensee good practices were observed:

1. Use of separate operations and EP controllers to facilitate the prompt, accurate, and effective communication of scenario events and evaluation of operations, security interfaces, and emergency response. The licensee also designated the operations/engineering staff member, who supported target set development, as the operations controller for the EP/operations demonstration portion of the FOF exercise.
2. Use of designate EP/operations controllers as “trusted agents” (per Appendix A to Inspection Procedure 71130.03) before the week of the FOF exercises, which allowed sufficient time for the review of scenarios to: (1) develop a data package for key indications reflecting the loss of systems, structures, and components identified in the target sets, and (2) identify postulated event classifications and offsite protective action recommendations (PARs) based on the assumption that adversaries successfully reach designated target set events.
3. Use of sufficiently detailed data packages to allow the control room staff to effectively work through the appropriate abnormal and emergency operations procedures for the postulated target set and to use the emergency action levels to appropriately classify the event.
4. Use of sufficient operations personnel to effectively demonstrate the operations actions and EP command and control functions from the control room for the FOF scenario. This included the licensee’s assigning an individual as the control room supervisor to: (1) realistically demonstrate assessment of plant system and equipment status and operations response, as well as normal interface with the shift manager; and (2) allow the shift manager to focus on the emergency coordinator functions identified in the station’s emergency plan and the plan’s implementing procedures.
5. Use of adequate numbers of licensee participants to conduct the exercise scenario. For example, if a control room takeover scenario was to be demonstrated, the licensee included additional participants who were procedurally designated to make classifications/notifications PARs, such as emergency operations facility staff.

6. Use of appropriate communication provisions, such that event information was delivered to all participants in a realistic manner.
7. Use of an onshift communicator, when normally located outside the control room envelope, to respond promptly to support offsite response organization (ORO) and emergency response organization (ERO) notifications from the control room or alternate onsite location. If the onshift communicator could not be expected to reach the control room, the licensee demonstrated the ability of available control room staff to perform notifications. If reasonable to assume that control room reactor operators on-shift would make notifications, the licensee included an individual representing that position as part of the control room staff complement.
8. Use of a control cell to realistically demonstrate performance of ORO and ERO notifications from the control room.
9. Monitoring of the lead security controller's radio frequency by an operations controller to continuously remain informed of the status of scenario events. The lead security controller also verified with the operations controller that the control room actions had been sufficiently demonstrated before terminating exercise.
10. Effective simulation of communications and interface with Security during the EP table top portion of the exercise after the termination of security participation. The individual simulating security interface was familiar with security response actions and terminology used in communicating with control room.
11. Briefing of control room participants in advance of the extent of play (specifically areas of simulation) and expectations for the table top demonstration.
12. Allowing control room operators to probe the target set progression in sufficient detail to identify protective strategies (both for personnel and equipment) and mitigative strategies based on available resources.
13. Demonstrating interface and communications with the unaffected station or unit. At sites with separate stations or multiple units with physically separated control rooms, the licensee separated control room staffs during drills to realistically demonstrate communications between control rooms versus communicating face-to-face or overhearing calls that could not occur between control rooms during an actual event.
14. Observing the EP component of a FOF exercise at another station in advance, and discussing lessons learned, such as perceived strengths and areas for improvement, with industry peers who recently conducted a FOF exercise.
15. Observing the EP/operations component of the FOF exercise by the licensee's Operator Training group to gain experience in EP/operations response to a security event and facilitate license operator initial and requalification training.

16. Use of the demonstration criteria in the inspection procedure to facilitate the post-exercise critique.

### **Communications**

The following licensee good practices were observed:

1. Use of operator aids for control room staff to illustrate security zones around the protected area and to list key plant doors with room or area titles (e.g., Door 123 is the RHR A Pump Room) to facilitate monitoring communications and interfacing with security.
2. Use of consistent names and acronyms to identify miscellaneous buildings, roads and structures, and terminology (switchyard lockout vs. LOOP) by security and control room staff.
3. Training of the designated security interface with the control room on what type of information that the shift manager would need for event classification or plant responses (e.g, a SCRAM).
4. Reinforcing the importance of control room communication and coordination with security before sending operators or other non-security plant personnel to perform critical in-plant functions in order to avoid potential friendly fire situations.
5. Simulating the incapacitation of postulated in-plant (out of control room) personnel if adequate security measures were not taken or scenario events were to impact anticipated movement of personnel.
6. Use of an open communications circuit between the secondary alarm station (SAS), and/or the central alarm station (CAS) to facilitate prompt communications between operations and security.
7. Identifying a communications protocol with the control room in the event the primary security communications post was lost (e.g., CAS would assume in the event SAS is lost).
8. Verifying whether primary and backup security communications were accessible from the mock control room as part of exercise preparation.
9. Identifying contingency plans to simulate the transfer of radio frequencies or communication devices in the event of a communications failure or radio jamming.

## **Procedures**

The following licensee good practices were observed:

1. Identifying contingency plans for the prompt notification of station personnel in normally occupied areas, where there was a known lack of coverage or an audibility concern with the plant public address (PA) system, and onshift staff (security, auxiliary operators, etc.) could not be mobilized to support supplemental notifications due to the security event.
2. Identifying contingency plans for general emergency classification and initiation of ORO notifications, including appropriate offsite PAR, in the event of a physical loss of the control room. Contingencies identified by licensees included a security-related evacuation strategy if the control room was threatened or use of an alternate location to initiate ORO notifications in the event of a physical loss of the control room.
3. Eliminating redundant PA announcements in multiple station procedures (e.g., seek immediate cover) or ensuring consistency in the wording of the announcement in the various procedures.
4. Reviewing the ORO notification form and process for an actual or imminent security-event with State and local officials and identifying ways of minimizing the time needed to complete the form and transmit the notification.
5. Performing an applicability review for changes to operations or security procedures, where emergency plan implementing procedure actions had been relocated to these procedures, to confirm that the requirements of the emergency plan were being maintained.
6. Updating recovery guidelines to address security event contingencies. The following are examples of security event-related recovery contingencies identified by licensees during EP table top discussions:
  - Prioritizing areas where access was needed as part of initial “take back” strategy by local law enforcement agencies (LLEAs) to help assess and restore critical plant safety functions, rescue plant personnel who need immediate medical attention, extinguish fires in critical plant areas, reoccupy the onsite emergency facilities, etc.
  - Establishing guidance for contacting ERO personnel at the alternate near-site location to assist in determining initial event mitigation priorities, and focusing on technical support center accident assessment and relocating needed operations support center resources to the site.



- Assessing offsite fire-fighting and medical/ambulance needs based on potential gunshot wounds, multiple fire locations, etc., including decision making as to when it would be acceptably safe to allow entry of fire-fighting/ambulance personnel, how that decision would be reached, and in what manner would re-entry be conducted (i.e. using plant security and/or LLEA resources).

### **Event Response**

The following licensee good practices were observed:

1. Use of a site-specific security event callout system scenario or method for directing ERO responders to an alternate near-site location. Where LLEAs were still relied upon to re-direct ERO members responding to the site, the licensee had evaluated the impact on specific LLEAs to perform collateral functions (threat response, traffic control, fire and medical team security, etc.).
2. Suspending the need to reactivate the designated security event scenario, after an escalation in event classification where ERO response actions do not change, to reduce the burden on control room staff.
3. Adding a procedure step to evaluate whether it was safe for a designated onshift communicator, who was normally located outside the immediate vicinity of the control room, to respond to the control room.
4. Identifying a contingency plan for notifications to be performed by available control room staff or at an alternate onsite location, when event conditions were determined to be unsafe for the onshift communicator to proceed to the control room.
5. Use of a near-site staging area to allow for the prompt notification and mobilization of offsite fire-fighting and medical/ambulance support, whose facilities were not close to the station or required the callout of volunteers.
6. Clearly assigning responsibility for requesting offsite fire-fighting and medical/ambulance support during a security event.

