

## ATTACHMENT 71114.07

INSPECTABLE AREA: Force-On-Force (FOF) Exercise Evaluation

CORNERSTONE: Emergency Preparedness

INSPECTION BASES: Interim compensatory measures (ICM) were issued under Commission Order, dated February 25, 2002. The Commission endorsed implementation guidance provided by the Nuclear Energy Institute (NEI) on March 8, 2002. The guidance developed in support of ICM Nos. 5.a and 5.d is applicable to this inspection. The ICMs and supporting guidance are located in documents which contain safeguards information.

A security event may be a rapidly developing situation which requires the licensee to respond to multiple contingencies. Generally, the ICMs and supporting guidance required licensees to review procedures and staffing to ensure an adequate response to terrorist events. This inspection verifies that the licensee can conduct the Emergency Preparedness (EP) portion of FOF exercises, identify emergency response weaknesses via a formal critique process, and correct those weaknesses through the corrective action program. This inspection activity is associated with planning standard 10 CFR 50.47(b)(14).

This inspection verifies aspects of the Emergency Preparedness Cornerstone for which there are no indicators to measure performance.

LEVEL OF EFFORT: The inspector will perform the following:

- Review EP weaknesses identified in the previous FOF exercise inspection report to use as a basis for evaluation.
- Evaluate the licensee's ability to integrate security, plant operations, and emergency response actions during a terrorist event, through observation of the EP portion of the FOF exercise, and to assess its own performance via a formal critique in order to identify and correct EP weaknesses.

### 71114.07-01 INSPECTION OBJECTIVE

01.01 To evaluate the EP portion of the FOF exercise, including the adequacy of actions to integrate security, plant operations and emergency response, and the licensee's critique process to identify and correct EP weaknesses.

The EP portion of FOF exercises are conducted ~~as table-top drills~~ with a limited Control Room staff ~~(e.g., Shift Manager and a communicator)~~ and limited simulation of the EP infrastructure that supports the staff. These limitations affect the realism of the response and limit the value of table-top drills for performance evaluation in that weaknesses noted may be attributable to the drill simulation rather than personnel performance. This should be taken into account by the inspector during the exercise evaluation. Overall, table-top drills are excellent training tools and the EP portion of FOF exercises has enhanced the integrated response to terrorist-based events.

Evaluation of licensee emergency response activities under this attachment will be performed concurrently with FOF exercises scheduled by the [Office of Nuclear Security and Incident Response \(NSIR\)](#) /Division of ~~Nuclear Security Operations~~ (DNOS) under the Physical Protection Cornerstone.

- 02.01 Review any EP corrective actions identified during the previous FOF exercise that will be demonstrated during the current FOF exercise, to determine whether corrective actions have been completed and adequately address the causes.
- 02.02 Perform independent observations of licensee exercise performance based on the scope of demonstration identified. Emphasis is to be placed upon the adequacy of the operations-security interface and emergency response actions during a terrorist event. Also, observe whether corrective actions reviewed under Section 02.01 were effective in correcting the identified weaknesses.
- 02.03 Determine whether inspector-identified EP weaknesses were identified during the licensee's exercise critique and entered into the corrective action program.
- 02.04 If applicable, determine whether licensee assessment of EP performance with regard to activities contributing to the Drill and Exercise Performance (DEP) Performance Indicator (PI) is in accordance with the applicable criteria of NEI 99-02, "Regulatory Assessment Performance Indicator Guideline."

### Inspection Preparation

The primary focus of this inspection is to evaluate the licensee's critique of the operations-security interface and emergency response actions during a simulated terrorist event. In preparation, review the licensee procedure for control room response to a terrorist attack, and the Emergency Plan and Implementing Procedures (EIPs) that provide instructions for classification, notification, protective action recommendation (PAR) development, and contingencies for the response to a security event. Develop an understanding of the criteria for timely and accurate completion of these activities based on scenario events and EIP guidance. Also, review NRC Bulletin 2005-02 (ML051740058), "Emergency Preparedness and Response Actions For Security-Based Events" ~~and Regulatory Issue Summary (RIS) 2004-015 (ML041810037) and Supplements~~, for additional guidance on expected licensee response to a security-based event ~~and the following Regulatory Issue Summary (RIS) documents for a listing of identified good practices to enhance the development and conduct of EP component of FOF exercise:~~

- [RIS 2004-15, "Emergency Preparedness Issues: Post-9/11," \(ML041810037\)](#), and-
- [RIS 2006-02, "Good Practices for Licensee Performance During the EP Component of FOF](#)

Exercises," (ML052970294).

Activities will be controlled and assessed for EP weaknesses using the normal critique process. Exercise weaknesses must be entered into the corrective action process and corrected. EP inspection results will be reported in the FOF inspection report issued by NSIR/DNS and will not be publicly available.

The determination of whether the risk-significant activities of classification, notification and PAR development will be counted toward the DEP PI is reflected by the level of simulation and is left to the licensee's discretion. However, 10 CFR 50.47(b)(14) and Appendix E to Part 50 require that the licensee critique its exercise performance and correct EP weaknesses even if no DEP PI opportunities were identified.

Note: The FOF exercise schedule is Sensitive Unclassified Non-Safeguards Information and should be handled accordingly.

Discuss EP objectives and level of demonstration for EP activities with licensee EP personnel about 30 days prior to the FOF exercise, and inform the regional EP Branch Chief and the DNS Team Leader of the contact. Use the following guidelines to frame the discussion with the licensee:

~~Actual performance (P) of actions is preferable to a walk-through (W) of activities. Walk-through (hands-on, walk-through up to the point of actual implementation) is preferable to discussion (D) of activities. A detailed discussion is appropriate where other efforts (P, W) cannot be completed.~~

- ~~Simulation of plant operational and radiological conditions, including system and equipment status, need only be realistic enough to drive demonstration. In the absence of a simulator, it is sufficient to relate general system status information rather than by indicator name or reading.~~
- ~~Controller(s) should be currently qualified in plant operations and knowledgeable of the scenario and expected plant and ERO response (i.e., able to provide earned information as the scenario flow dictates). Controllers should be provided with a sufficiently detailed scenario and cues to realistically simulate those personnel or activities required by the licensee's Emergency Plan, including any challenges or failures which are part of the planned scenario. To accomplish this, the controller responsible for developing EP/operations related injects should be provided advance access to the proposed scenario as a "trusted agent" per the guidelines in Addendum 3 to IP Attachment 71130.03, "Contingency Response – Force-on-Force Testing."~~
- The EP portion of the FOF exercise should be conducted in a designated facility other than the actual control room. Exercise conduct in a simulator would be desirable, but other alternatives are adequate to support the demonstration (i.e., Technical Support Center/Operations Support Center with communication methods that emulate those available in the control room and provide access to plant procedures).
- At a minimum, the following resources should be pre-identified to emulate on-shift control room staffing:
  - ~~a~~ qualified Shift Manager (SM) ~~should be assigned~~ to perform operations-security interface and emergency response activities from the simulated control room.
  - Control Room Supervisor/Foreman to simulate simulating plant operations functions and interfaces which are expected to occur in the control room

- ~~The simulated staff should emulate the resources the SM would have on-shift. Generally, a~~At least one person ~~is assigned~~ to implement emergency response actions, such as notifications (e.g., Shift Communicator). ~~If the responsibilities for this position are limited to performing notifications, and are not required to complete forms for offsite notifications or personnel callouts, etc., then Unless that individual would not be available during a security event,~~ the resource may be provided by a knowledgeable person rather than a person qualified in that position (i.e., an emergency planner rather than an operator). ~~Consideration should also be given to designating additional individuals (i.e., Control Room Supervisor/Foreman) or otherwise simulating plant operations functions and interfaces which are expected to occur in the control room based on station-specific Emergency Plan staffing.~~

If designated on-shift staff (i.e., Shift Communicator) are not normally located in or adjacent to the Control Room, and response to the Control Room would be prohibited based on the postulated scenario or SM direction, then available control room staff should demonstrate performance of these actions based on contingencies provided in licensee procedures or training.

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~~When necessary plant personnel or activities required by the licensee's Emergency Plan are simulated, controllers should be provided with a sufficiently detailed scenario and cues to realistically simulate those personnel or activities, including any challenges or failures which are part of the planned scenario.~~

The following tasks will be demonstrated during the NRC-observed FOF scenario to the extent possible based on the duration of the security portion of the FOF exercise (per IP Attachment 71130.03). Further demonstration of EP aspects will not be required following termination of security portion of FOF exercise. However, the termination of exercise play should be coordinated between the lead security and control room controllers to allow the demonstration of EP activities currently underway.

#### ommunications

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- a. **Offsite notifications:** Timely initial and follow-up contact with State and local agencies, and the NRC; per the EIPs for event classification, offsite protective action recommendations (PARs) ~~as applicable~~, and event status.

Extent of Play: This should include, at a minimum, the accurate completion ~~and approval~~ of appropriate forms, ~~and demonstration of the ability to perform these actions (i.e., availability of communications equipment, and on-shift personnel available and knowledge of associated procedures).~~ The level of simulation should at least be timed to simulate resource deployment.

**Notification of State and local authorities** – Actual performance of notification is not required unless needed to support DEP credit.

**NRC notification** – See NRC Bulletin 2005-02, Attachment 3, for additional information concerning NRC notification of a security event. ~~If the accelerated notification does not include the emergency classification, then a separate notification should be demonstrated following the completion of State/local notifications per 10 CFR 50.72.~~  
**(P, W)**

**b. Mobilization of emergency response organization (ERO):**

Extent of Play: This should include, at a minimum, the assessment of appropriate alternate offsite assembly facility or location, identification of appropriate callout scenarios and mechanisms, completion of appropriate forms, and walk-through of procedural steps required ~~demonstration of ability~~ to activate designated call out method(s) and or other means used to ~~of~~ directing ERO personnel to an alternate assembly facility or location. Actual calls need not be made, but should be timed to simulate resource deployment. See NRC Bulletin 2005-02, Attachment 5, for additional information concerning ERO augmentation during a security event. ~~(P, W)~~

**c. Onsite announcements:**

Extent of Play: This includes, at a minimum, the identification of required communications, including message text, made to site personnel from the control room per the EIPs and hostile threat procedure(s), dealing with event classification, onsite protective measures, etc., using designated site communications systems. Actual announcements, while encouraged to enhance performance during the FOF exercise, need not be made. However, the text of the message, at a minimum, needs to be communicated to the Controller. See NRC Bulletin 2005-02, Attachment 4, for additional information concerning onsite protective measures during a security event. ~~(P, W)~~

**d. Security/Operations communications:**

Extent of Play: This includes, at a minimum, the actual communication of the following information between the control room and designated security command and control point (i.e., CAS, SAS) using appropriate primary and backup communications systems per station procedures:

- The location of intruders and impact of intruder activities ~~should be communicated promptly from station Security to the control room~~ to allow for the timely implementation of appropriate plant hostile threat actions and the timely assessment of event classification, ~~Communications to station Security from the control room should address~~
- equipment concerns/priorities,
- proposed movement of on-shift staff (equipment operators, fire brigade, etc.),
- operation of plant equipment that may impact security response (restricting access, etc.), and
- onsite protective measures, and response by offsite responders (fire-fighting, ambulance, etc.) to the site. ~~(P)~~

In the event of the postulated loss of the primary means of communications with station security, control room staff shall actually demonstrate the ability to use designated backup communications method(s), once loss is identified. If backup communications are being simulated or are not available from the simulator (or designated control room facility (i.e., TSC), then control room staff shall identify actions needed to re-establish communications.

~~b. E-Plan Implementation~~

- e. ~~Initial and subsequent E-Plan emergency classifications:~~ Prompt and accurate classification of postulated events, based on ~~station-specific~~ emergency action levels (EALs).

Extent of Play: This includes, at a minimum, the actual declaration by the SM of the initial and any subsequent emergency classifications per the station-specific EALs based on postulated events, to include the required announcements to control room staff, etc. as identified in the EIPs. See NRC Bulletin 2005-02, Attachment 2, for additional information concerning acceptable emergency classification level definitions and emergency action levels for use during a security event. ~~(P)~~

Note: The prepared scenario should clearly identify the expected event classifications and associated emergency action levels, as well as onsite protective actions and offsite protective action recommendations. Any deviations from the expected scenario may be credible, but should be reviewed for accuracy by the inspector.

- f. **Onsite protective actions:**

Extent of Play: This includes, at a minimum, the actual identification by the SM of the appropriate ~~Decision-making for the implementation of~~ onsite protective actions based on security threat (i.e., seek cover, assembly/accountability, site evacuation, search & rescue, etc.) using toolbox guidance contained in the EIPs. See NRC Bulletin 2005-02, Attachment 4, for additional information concerning onsite protective measures during a security event. The ability to effectively communicate protective measures to onsite personnel will be demonstrated under Item c above. ~~(W, D)~~

- g. **Assess radiological release:**

~~Identify whether~~ Extent of Play: This includes, at a minimum, the actual identification by the SM of any monitored or unmonitored release(s) ~~is in progress,~~ and a walk-through of required immediate actions per the EIPs to assess the impact of the release(s) on the public. ~~(P, W)~~

- h. **Offsite PARs:** Prompt and accurate identification of the appropriate PARs using station-specific PAR methodology, based on event classification, plant conditions, and actual or projected offsite doses. ~~(P)~~

Extent of Play: This includes, at a minimum, the actual identification by the SM of appropriate offsite PARs based on a walk-through of options as identified in EIPs. The ability to effectively communicate protective measures to onsite personnel will be demonstrated under Item a above.

Note: Exercise play may terminate based on the successful response by station security to postulated security event prior to the escalation of the emergency classification that would require consideration of offsite PARs.

~~c. Operational Response~~

- i. **Control Room response:**

Extent of Play: This includes, at a minimum, the following:

Note: The SM is not expected to develop detailed accident mitigation strategies beyond those identified in developing the target set..

- A walk-through of licensee contingency procedures for control room response to postulated security events;
- Identification of response priorities and appropriate mitigative actions, consistent with those identified in target set, based on changing plant conditions;
- Discussion of appropriate in-plant response to equipment issues, and consideration as to how plant actions are performed in coordination with station during a security event.; and Simulation of plant operational and radiological conditions, including system and equipment status, need only be realistic enough to drive demonstration. In the absence of a simulator, it is sufficient to relate general system status information rather than by indicator name or reading. The SM is not expected to develop detailed accident mitigation strategies. However, the SM is expected to develop initial priorities and take actions consistent with the ERO capabilities postulated in the scenario (normal or off-normal hours) **(W, D)**

~~Remaining tasks, if applicable to the scenario, should be demonstrated as part of a table-top discussion led by the licensee Controller, which postulates adversaries achieving the target set. To achieve this, the EP demonstration may continue after the termination of security aspects of the exercise. However, this effort should not delay the post-exercise critique.~~

~~Medical emergency: Response to a medical emergency onsite, including first aid, emergency medical team (EMT), and ambulance response. This should include the need to provide responder protection or to delay deployment based on a security event in progress. (W, D)~~

~~Fire emergency: Response by station fire brigade to an onsite fire emergency and coordination of fire-fighting activities with the simulated control room. Notification and response of offsite fire-fighting assistance, including coordination of site access or assembly at a designated offsite area, as applicable. This should include the need to provide responder protection or to delay deployment based on a security event in progress. **(W, D)**~~

~~Control Room evacuation: Based on the report of an actual or perceived imminent physical loss of the control room, walk-through actions for a control room evacuation based on station procedures, including physical protective measures (i.e., from friendly or hostile fire) for personnel leaving the control room, based on an actual or perceived imminent physical loss of the control room. Demonstrate knowledge of In addition, discuss contingencies for performing offsite notifications after evacuation and prior to the activation of emergency facilities, as applicable. **(W, D)**~~

~~Local law enforcement agency (LLEA) interface: Incorporation of LLEA support, including control room interface with Security/LLEA. (W, D)~~

~~ERO interface: Communication with the ERO at the alternate facility regarding the utilization of limited onsite resources, assessment of event conditions, and prioritization of control room support actions. (W, D)~~

~~Post security event activities: Coordination with the security shift supervisor on decisions to conduct site assembly/accountability and/or evacuation, the mobilization of onsite and offsite medical and fire-fighting resources, and the staffing of onsite emergency facilities, etc. **(W, D)**~~

03.01 Review the previous FOF exercise inspection report and EP critiques for any FOF exercises conducted by the licensee, and select a sample of EP corrective actions for inspection during the present exercise. Consider trends, repeat items and items that could represent a failure to meet an EP planning standard. Priority should be given to critique items that were problems with the operations-security interface and emergency response to a security event, rather than classification, notification and PAR development, as is normal in other exercise evaluations. Determine whether corrective actions have been completed and adequately address the causes.

03.02 During the exercise, develop independent observations of the licensee's performance based on the EIPs and security threat procedures using the scope of demonstration identified in Section 03.01. Identify any apparent EP performance weakness(es) in the operations-security interface and emergency response actions during the security event. Verify that corrective actions reviewed under Section 02.01 were effective in correcting the identified weaknesses.

Note: Inspectors must understand that security events may proceed rapidly resulting in EP activities occurring at a rapid pace. For example, an event could transition from an Unusual Event to a Site Area Emergency within a few minutes. The inspector must exercise judgement in the evaluation of licensee emergency response. Specifically, classification of lower level emergencies may be overcome by fast moving events and the successful classification of higher level emergencies.

Note: Prompting of exercise participants is not a finding under the assessment process because it represents no risk significance in itself. However, if applicable, prompting would render a DEP PI opportunity a failure and should be documented when observed.

03.03 Following the exercise, observe the licensee's evaluator meetings and critiques where exercise weaknesses are identified. Observe the licensee's presentation of exercise weaknesses to site management. Critique emphasis should be on the operations-security interface and emergency response actions in response to the security event.

Determine if the licensee critique identified the exercise weakness(es) observed by the inspector. If the inspector identified exercise weaknesses that the licensee did not, it may represent a failure to adequately assess exercise weaknesses, and a potential finding under 10 CFR 50.47(b)(14). Licensee critique failures shall be documented, assessed for significance, and addressed during the NRC exit meeting.

Note: \_\_\_\_\_Inspector-identified EP weaknesses must be held confidential until after the licensee critique.

Verify that licensee-identified exercise weaknesses are entered into the licensee corrective action system in a manner that will allow NRC review of the resolution in the future, (i.e., during subsequent EP exercises).

Note: \_\_\_\_\_Poor exercise performance is not a regulatory issue if the licensee identifies and corrects any exercise weaknesses. Refer to IP 71114.01, Section 03.04 thru 03.06, for further guidance on the evaluation of licensee critiques, findings, and performance problems that may represent a trend or a repeat weakness.

03.04 Gather copies of completed forms and checklists that support or document classification, notification and PAR development activities and other areas selected for inspection.

If applicable, determine whether the licensee properly dispositioned the classification, notification and PAR development activities, with regard to PI statistics. The licensee's assessment of performance shall be in accordance with the criteria of NEI 99-02, Section 2.4, "Emergency Preparedness Cornerstone, Drill/Exercise Performance." Any discrepancies should be discussed with licensee management and documented.

Note: ———FOF exercises are only included in PI statistics at the discretion of the licensee and must be identified in advance. However, PI opportunities cannot be removed from the statistics due to poor performance.

#### 71114.07-04 RESOURCE ESTIMATE

The direct inspection effort for this attachment is estimated to be, on average, 6-10 hours every three years, regardless of the number of reactor units at a site. This inspection effort does not require any additional resources from the inspection program since it utilizes hours already allotted in Inspection Procedure (IP) 71114.06 (see Section 05, "Procedure Completion").

#### 71114.07-05 PROCEDURE COMPLETION

This procedure is considered complete when all the inspection requirements listed in the procedure have been satisfied. For the purpose of reporting completion in the Reactor Program System (RPS), the sample size is defined as one (1). A sample size of 1 will be reported in RPS when the procedure is completed in its entirety. The performance of this IP meets the requirements of observing an EP drill or simulator-based training evolution in IP 71114.06, and should be performed in place of that drill/training evolution every three years at each power reactor site.

Attachments:  
Revision History Page

END

Revision History For IP 71114.07

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
N/A	12/30/05	New Procedure	Yes	12/13/05	ML053490213

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