
INSPECTION MANUAL CHAPTER 0609 APPENDIX E, PART II

FORCE-ON-FORCE SIGNIFICANCE DETERMINATION PROCESS

Effective Date: January 1, 2026

0609EII-01 PURPOSE

The purpose of the Force-on-Force (FOF) Significance Determination Process (SDP) is to provide an objective and consistent means of evaluating findings associated with licensee exercise performance during a U.S. Nuclear Regulatory Commission (NRC) triennial FOF inspection. Findings in the security cornerstone unrelated to exercise performance, including target set findings, are evaluated using Inspection Manual Chapter (IMC) 0609, Appendix E, Part I, "Baseline Security Significance Determination Process."

0609EII-02 BACKGROUND

The FOF inspection process is designed to assess the robustness of a licensee's protective strategy by testing the licensee's ability to adequately protect target set equipment in order to prevent significant core damage and spent fuel sabotage during an NRC-conducted FOF exercise. Generally, a licensee's protective strategy is evaluated on the basis of its ability to protect the structures, systems, and components (SSCs) and credited operator actions that make up the applicable target sets for that facility.

IMC 0609, Appendix E, Part II, evaluates the overall significance of findings associated with the licensee's exercise performance during the conduct of all NRC-conducted FOF exercises. The NRC assesses licensee exercise performance as:

1. Effective implementation of the protective strategy
2. Ineffective implementation of the protective strategy
3. Indeterminate performance during an exercise, where an overall determination of adequacy was not achieved

0609EII-03 DEFINITIONS

Effective Exercise: An exercise where the licensee's protective strategy successfully protected the selected target set from simulated destruction and compromise by the mock adversary force in order to prevent significant core damage and spent fuel sabotage in accordance with implementation procedures, regulatory requirements, or other Commission requirements.

Ineffective Exercise: An exercise where the licensee's protective strategy failed to adequately protect the selected target set from simulated destruction and compromise by the mock adversary force in accordance with implementation procedures, regulatory requirements, or other Commission requirements such that which all components of the selected target set were simulated destroyed or compromised.

Indeterminate Exercise: An exercise where the results were significantly skewed by an anomaly or anomalies, resulting in the inability to determine the outcome of the exercise (e.g., site responders neutralize the mock adversary force using procedures or practices unanticipated by the design of the site protective strategy or training of security personnel to implement the site protective strategy, or significant exercise control failures to include controller performance failures). The inability to reliably determine the outcome of the exercise can also create an indeterminate exercise.

Target Set: The minimum combination of equipment or operator actions which, if all were prevented from performing their intended safety function or prevented from being accomplished, would likely result in significant core damage (e.g., non-incipient, non-localized fuel melting and/or core destruction) or a loss of spent fuel water inventory and exposure of spent fuel, barring extraordinary actions by plant operators.

0609EII-04 ASSESSMENT PROCESS

The FOF SDP assesses more-than-minor exercise performance deficiencies during NRC-conducted FOF exercises. When an issue of concern with a licensee's exercise performance is identified, the issue is first screened using IMC 0612, Appendix B, "Issue Screening." All more-than-minor performance deficiencies related to exercise performance (i.e., ineffective implementation, or indeterminate exercise performance), will be screened through the FOF SDP to determine the finding's significance. If the finding is in the security area but unrelated to licensee exercise performance, evaluate the finding using IMC 0609, Appendix E, Part I. If the finding is related to ineffective exercise performance, it is screened as a Green finding.

Inspectors will utilize the FOF SDP to determine the appropriate Re-Visit Action for ineffective and indeterminate outcomes.

The Re-Visit Action for an ineffective exercise will be an NRC-conducted FOF exercise and a review of the licensee's corrective action measures (CAMs) from the previous exercise. Inspectors should consider the following when determining the appropriate Re-Visit Action for indeterminate outcomes: an NRC-conducted exercise is required when no useable data is gathered during the exercise, other Re-Visit actions will be determined based on the inspection team's assessment and NRC Management's input.

If the finding is in the security cornerstone but is unrelated to exercise performance associated with the ineffective implementation of the protective strategy, then inspectors will evaluate the finding using IMC 0609, Appendix E, Part I. For significant issues, Part I provides a path for escalated enforcement. The process for evaluating FOF exercise findings is described below and is depicted in Figures 1 and 2.

04.01 Determine if the licensee's exercise performance resulted in an EFFECTIVE exercise outcome with performance deficiencies.

- a. If the licensee's exercise performance resulted in an effective exercise outcome with associated performance deficiencies, continue to IMC 0609, Appendix E, Part I, "Baseline Security Significance Determination Process."

04.02 Determine if the licensee's exercise performance resulted in an INDETERMINATE exercise outcome.

- a. If the licensee's exercise performance resulted in an indeterminate exercise outcome with associated performance deficiencies, continue to IMC 0609, Appendix E, Part I, "Baseline Security Significance Determination Process;"
- b. Refer to the Re-Visit Action table in Figure 2 to determine the appropriate re-inspection activity.
- c. Inspections that result in an indeterminate outcome require Re-Visit Action. One of the following will be applied based on the quantity and nature of the observations that were gathered from the exercise relative to the implementation of the protective strategy:
 1. A review of the CAMs;
 2. NRC observation and assessment of licensee-conducted exercise(s);
 3. One NRC-conducted exercise.

04.03 Determine if the licensee's exercise performance resulted in an INEFFECTIVE exercise outcome.

- a. If the licensee's exercise performance resulted in an ineffective exercise outcome, the finding is Green.
- b. Inspections that result in an ineffective outcome require both of the following Re-Visit Actions:
 1. A review of the CAMs;
 2. One NRC-conducted exercise.

04.04 FOF SDP use for re-inspection exercises.

Re-inspection is considered for all exercise outcomes resulting in an indeterminate or ineffective characterization. Refer to the Re-Visit Action column in Figure 2 for potential re-visit activities.

When an issue of concern with a licensee's exercise performance is identified during re-inspection, the issue should first be screened using IMC 0612, Appendix B. If the issue is determined to be a more-than-minor performance deficiency, it is a finding. If the finding is related to ineffective or indeterminate exercise performance outcomes, use the FOF SDP. If the finding is in the security area but unrelated to the licensee's exercise performance, then evaluate the finding using IMC 0609, Appendix E, Part I.

Other factors that may be assessed and reviewed before determining the final significance of findings related to re-inspection activities include:

- a. A review of the licensee's corrective actions implemented as a result of the triennial inspection that caused the re-inspection:

1. Were the corrective actions ineffective and/or contribute to the cause of the ineffective implementation of the site's protective strategy or indeterminate exercise performance during an exercise(s)?
 2. Is the finding(s) during re-inspection related to new issues unrelated to the corrective actions implemented before the re-inspection activities?
- b. A review to determine the need to conduct additional inspection activities, such as the following:
1. An NRC-conducted exercise (for an ineffective or indeterminate NRC-conducted Re-Visit exercise);
 2. NRC observation and assessment of licensee-conducted FOF exercise;
 3. Review of CAMs taken to resolve programmatic issues related to the finding(s) identified during the re-inspection activity.

If the NRC becomes aware of situations that are not appropriately captured by this SDP, indicating flaws in the development or implementation of a licensee's protective strategy, NSIR management may exercise discretion to further evaluate the potential deficiency

0609EII-05 REFERENCES

IMC 0609, Appendix E, Part I, "Baseline Security Significance Determination Process"

END

Figures:

Figure 1: Force-on-Force Significance Determination Process Flowchart

Figure 2: Force-on-Force Significance Determination Process Table

Attachments:

Attachment 1: Revision History for IMC 0609, Appendix E, Part II

Figure 1: Force-on-Force Significance Determination Process Flowchart

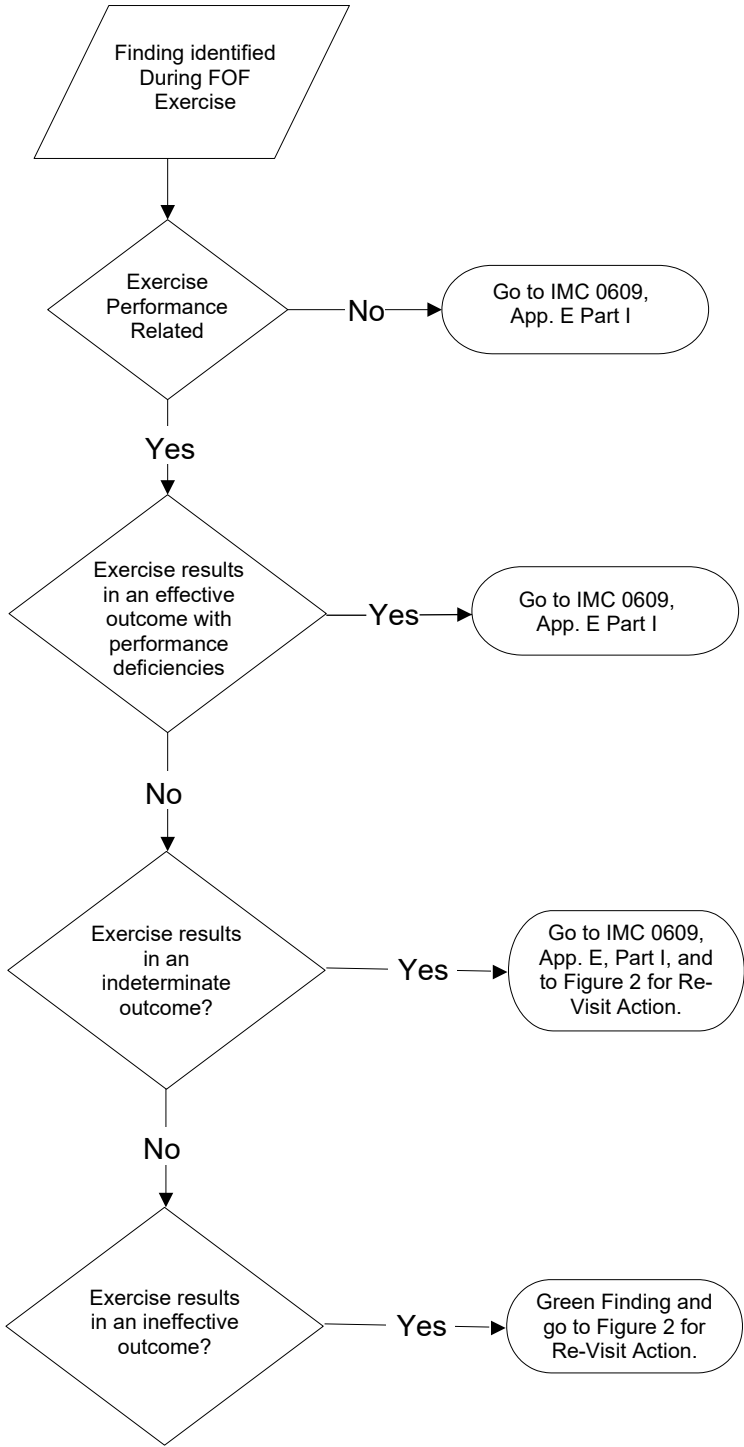


Figure 2: Force-on-Force Significance Determination Process Table

Exercise	Significance	Re-Visit Action
Ineffective	Green	1) CAMs Review and NRC-conducted FOF exercise
Indeterminate	Determine via baseline security SDP	1) CAMs Review; 2) NRC observed FOF exercise; or 3) NRC-conducted FOF exercise

Re-Visit Action for Ineffective Exercise Outcomes

1. NRC-Conducted Exercise, and CAMs Review.

Re-Visit Action Examples for Indeterminate Exercise Outcomes

1. NRC-Conducted Exercise: When the overall outcome of the exercise cannot be determined and there are no useable observations from the single NRC-conducted exercise.
2. Observe Licensee-Conducted Exercise: When the overall outcome of the exercise cannot be determined but useable observations can be gleaned from the single exercise; however, multiple security response force performance issues or significant controller issues were identified.
3. CAMs Review: When the overall outcome of the exercise cannot be determined but useable observations can be gleaned from the single exercise; however, individual response force issues or one or more controller issues were identified.

Attachment 1: Revision History for IMC 0609 Appendix E, Part II

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional Non-Public Information)
N/A	7/21/05	First Issuance	N/A	N/A
N/A	ML12198A157 07/27/12 CN 12-016	Revised to enhance screening tools for FOF exercise failures and incorporate criteria for marginal exercise performance.	N/A	N/A
	ML13350A408 01/15/14 CN 14-002	Entire document revised to reflect FOF program changes and incorporate 0040 format changes.	N/A	N/A
	ML24264A078 09/24/25 CN 25-031	Revised in accordance with SRM-SECY-17-0100 and SRM-COMSECY-19-0006 to reduce the number of NRC-conducted FOF exercises from two to one. This revision was a complete rewrite. This revision included a determination that this IMC is no longer Official Use Only – Security-Related Information.	Inspector implementation training held May 2025	ML24264A076