

**Significance Determination Process (SDP) Conceptual models being
evaluated to implement SECY-17-0100¹ Option 3**

Note: Public availability of this document is to inform stakeholders of the NRC staff's development of the significance determination process (SDP) in response Commission direction to implement Option 3 in SRM-SECY-17-0100 (ML18283A072). This does not incorporate options for crediting operator actions, flex equipment, or law enforcement response. Those topics are being addressed separately.

Model 1

Model 1, considers FOF exercise outcomes based on whether the exercise was determined to be effective, indeterminate, or ineffective. It replaces the current PTC inputs with a potential mitigation process that considers related available operator actions (AOA) that could be implemented to prevent or mitigate core damage. In this model, the mitigation would be applied for ineffective exercise outcomes if the licensee meets the reasonable assurance levels for mitigation. Additionally, in this model, the staff recommends that performance deficiencies that led to indeterminate exercise outcomes be screened through the baseline security inspection significance determination process (BSSDP). The BSSDP considers individual programmatic failures and assigns significance based on its association with the performance deficiency.

The following table provides a conceptual model for characterizing ineffective outcomes:

Scale			
0 to 10	Green		
10 to 17	White		
Exercise	Points	Operator Actions Available to Mitigate Core Damage	Operator Actions Available to Prevent Core Damage
Ineffective	11	9 points	8 points

Available Operator Actions	
Operator Actions Available to Mitigate Core Damage	-2
Operator Actions Available to Prevent Core Damage	-3

Available Operator Actions consists of the potential mitigation actions that licensees could employ based on meeting the 6 criterion in RG 5.81 and specific severe accident mitigation guidelines (SAMG).

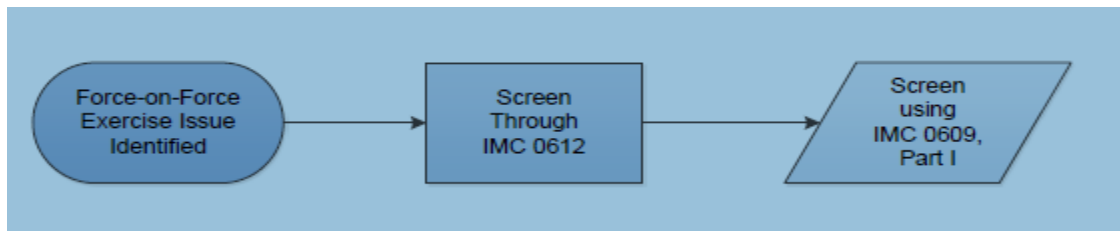
The AOA mitigation is only provided if the actions could mitigate or prevent the actions taken by the adversary force. Additionally, the licensee processes must be a previously established and documented in plans and procedures.

¹ SECY-17-0100, "Security Baseline Inspection Program Assessment Results and Recommendations for Program Efficiencies," (Agencywide Document and

Model 2

Model 2 consists of removing FOF exercise outcomes from the current FOF SDP process. While outcomes would still be necessary for evaluation purposes, they would not be considered as an input into the FOF SDP. In this model, the staff would identify individual performance deficiencies associated with the licensee's physical protection program and screen them utilizing the baseline security significance determination process (BSSDP).

Specific considerations related to this model follow: This model allows the NRC the ability to continue to evaluate overall licensee performance through the implementation of its protective strategy. It also allows the NRC to screen individual performance deficiencies related to the implementation of its physical protection program through the BSSDP and ultimately provide the appropriate amount of regulatory oversight to ensure timely corrective actions are completed by licensees. Specifically, the staff would continue to evaluate those corrective actions during subsequent baseline inspections.



Model 3

In this model, FOF exercise outcomes that result in ineffective outcomes are characterized as green findings. Staff considered the following during the development of this model:

FOF exercises contain artificialities and simulations that can impact the flow and play of exercises, which ultimately impacts response force actions and adversary actions in potentially negative manners depending on the time and location of the artificiality and or simulation. Additionally, the FOF exercise is a simulated attack and the results represent no true threat to the safety of the reactor. Based on these factors staff determined that licensees must continue to identify and correct performance deficiencies associated with the implementation of its physical protection program and that the characterization as a green finding would provide the licensee with the appropriate amount of regulatory oversight to ensure those deficiencies will be corrected in a timely manner. Specifically, staff would continue to evaluate those corrective actions during subsequent baseline inspections.

